Universidade do Minho

INSTITUTIONAL SELF-EVALUATION REPORT

SUBMITTED BY THE UNIVERSITY OF MINHO

TO THE EUROPEAN UNIVERSITY ASSOCIATION

January 2007

INDEX

APPENDICES

APPENDIX – I: Schools, Departments, Degrees, and Degree Councils; Evolution of teaching staff per Department

APPENDIX – II: Organisational chart of the central administration and support services (Rector's office staff; *campus* maintenance; libraries etc.)

APPENDIX – III: Organisational chart of the management structure (Rector; Council/Senate; School Deans and Councils; major committees, etc.)

APPENDIX – IV: Student numbers for the whole institution, over the last five years; Time-to-graduation; Dropout rates; Success rates; Employment

APPENDIX – V: Academic staff numbers (by academic rank and School) for the whole institution, over the last five years

APPENDIX – VI: Institutional funding over the last five years

ANNEXES

ANNEX – I: CRE Institutional Assessment in 1997

ANNEX – II: Higher Education Student Evolution; Resident population by large age groups; Evolution of number of academic staff and number of students at the University

ANNEX – III: University Premises

ANNEX – IV: Imputation model; Analytical accounting; Computation of ratios for full-time equivalent teaching staff

ANNEX – V: Teaching staff per Department; Ratios student/staff per School and Department

ANNEX – VI: Age of Effective Teaching and Non-Teaching Staff by category

ANNEX – VII: Scientific research at the University

ANNEX – VIII: Extension Policy

ANNEX – IX: Strategic Objectives

ANNEX – X: Regional and National Labour-Market Situation

ANNEX – XI: Student Support Services

ANNEX – XII: Scientific pedagogical grid; Academic Council: a reflection on the current situation and scenarios for its future; Stakeholders´ self-evaluation (Schools, Services/Offices and Students)

FOREWORD

In the Mission Statement (1976) it is stated that the University of Minho (hereafter called "the University") is:

"…a centre of creation, transmission and diffusion of Culture, Science and Technology, having as main goals: a) human training, at the highest level, covering all aspects, cultural, scientific, artistic, technical, and professional; b) the development of fundamental and applied research, taking into account the necessities of the surrounding community; c) the providing of services to the community, based on reciprocal valorisation; d) the cultural, scientific and technical interchange with similar national or foreign institutions; e) the contribution, in the scope of its activities, for international cooperation."

The University is a Public University founded in 1974. At the time of the University's application for the EUA institutional evaluation, the University enrolment was 13,894 undergraduate students and 1,968 postgraduate students. Teaching and non-teaching staff are 1,131 and 627, respectively. The percentage of teaching staff holding a doctoral degree is 72.2%. Two thirds of the students are located in the Braga *campus*, whereas the other third are studying in the Guimarães *campus*.

The University considers itself to be a complete university, offering degrees which span from Medicine, Sciences and Technology, to Arts, Humanities and Law. In all cases, the University has developed a quality assurance system to ensure the best learning and teaching results. During the academic year 2005/06, the University deployed a serious effort to adjust the majority of its degrees to the Bologna terms of reference. Parallel measures were undertaken to help teachers and students to adapt to the new Bologna paradigm. New learning methodologies such as e-learning, active and project-led learning were implemented. A WI-FI system covers all locations in the *campi*.

The University is project-oriented and adopted a flexible, matrix organisation. This organisational structure is unique among Portuguese universities. The University management under this organisational structure optimises resources (both human and material) and provides flexibility in project development, drawing from competences gathered in resource units (the Schools and Institutes).

The University aims at being a *University Without Walls*, completely turned towards the surrounding socio-economic environment. The level of interaction with the external community, in all fields of knowledge and culture, is rather high. International activities are intense not only with the Portuguese-speaking countries but also with other countries from all continents.

The University considers itself to be a research university, engaged in the valorisation of the chain of knowledge - Research, Development and Innovation - as is evidenced by a series of indicators. The ratio between PhD students and PhD teaching staff is over 1; the fraction of postgraduate students in the total student population is 12.5% and will reach 15% in the near future; 72% of the teaching staff hold a PhD degree; the ratio between research projects and PhDs is over 0.5; around 120 PhD theses are awarded every year; the average yearly production of refereed papers published in international magazines is 1.4/full time equivalent/year; and 250 R&D contracts are signed every year with external companies.

The University is concerned with its social responsibility and has implemented a series of measures to look after minorities, to provide its students with soft skills and to reduce its environmental footprint.

There is room for improvement in all aspects of the University. The internal quality standards outlined in the present report will be a valuable tool to periodically assess quality improvement and to deploy the suitable corrective measures.

António José Guimarães Rodrigues
Rector

Universidade do Minho

Introduction

Brief analysis of the self-evaluation process

- **Self-evaluation team members**

    The Rector Resolution (RT-65/06), dated 06/10/25, defined the constitution, tasks and schedule of the Steering Committee responsible for the preparation of the Self-Evaluation Report.

    Members of the Steering Committee
    o Rector – António Guimarães Rodrigues
    o Vice-Rector – Manuel Mota
    o Vice-Rector – Acílio Rocha
    o Vice-Rector – Leandro Almeida
    o Pro-Rector – Irene Montenegro
    o Vice-President of the Academic Council – Rui Vieira de Castro
    o President of the School of Sciences – Graciete Dias
    o President of the School of Engineering – António Cunha
    o President of the Institute of Arts and Human Sciences – Fernando Machado
    o President of the School of Law – Luís Gonçalves
    o President of the School of Economics and Management – Margarida Proença
    o Administrator of Social Services – Carlos Silva
    o Representative of the Student Union – Roque Teixeira
    Secretary – Senior Officer, Natércia Morais

- **Collaboration with other structures and individual elements**

    The Steering Committee considered self-evaluation a means of promoting the self-awareness and participation of the various responsible University levels of decision-making and of reflecting on ways to reinforce the positive and reduce the negative aspects of the structure, procedures and processes encountered.

    The Steering Committee's composition was intended to involve a broad cross contribution from the University. The School Presidents present on the Committee opened the discussion on the Report guidelines within their Schools. At School level, consultation was achieved both by addressing the Scientific Councils, and by setting up communication channels within internally established discussion groups. The Academic Council designed a questionnaire to collect contributions to the report.

    Schools, Services/Offices, and Students were challenged to reflect on SWOT analyses, thus drawing the best advantage from the evaluation process.

- **Report discussion across the Institution**

    The Rectorate team went through the analysis, interpretation and discussion of the guidelines provided by the EUA and also over the definition and planning of the process in order to achieve the best advantage from the institutional assessment.

    A first meeting was held on the 22nd September with the School Presidents, as they are seen by the Rectorate as "permanent stakeholders", responsible for strategic, scientific and pedagogical orientations. The nature and objectives of the external assessment were explained as well as the rationale supporting the constitution of the Steering Committee.

    On the same day, at a posterior meeting with the nominated Steering Committee, the guidelines from EUA were presented in detail, their meaning was interpreted and the contents needed to be compiled were explored. The team includes the Vice-President of the Academic Council (a board with representation from Schools, Research Units, Degree Councils and Students). A main objective was to clarify the selection of the committee members and determine how their contribution was valuable and fitted into the process. A general schedule was proposed.

    The Steering Committee met again on the 6th October 2006. The Pro-Rector, appointed as the liaison person, presented a report on the "EUA Institutional Evaluation Programme Workshop for Universities: Round 2006 – 07", held in Brussels on the 4th October 2006. An Index for the Self-Evaluation Report was approved. Some interesting analyses compiled for the Report were presented and discussed. An overall review of the stage of development of the Report was made, pinpointing the associated difficulties, and identifying necessary contributions. Particular attention was given to the methodology to adopt in order to guarantee a major and responsible participation of the Academy to the evaluation process, taking advantage of the current evaluation process to set up or reinforce the reflection over mission, objectives and responsibilities and, eventually, to foresee the necessary adjustments. The Academic Council, Schools, Services/Offices and Students were invited to undertake a SWOT analysis (concerning teaching/learning, research and services, where appropriate), to prepare orientation and proposals, and to consider possible corrective actions by the coordinating and governing bodies of the University towards meeting those objectives.

    The Steering Committee met on October 20th when the members of the committee explained how they had planned to perform the SWOT analysis involving the bodies or units they "represent" in the team and how they were

seeking contributions towards this analysis and also towards the preparation of the Self-Evaluation Report. The report lines were once again followed, indexing the expected contributions to different members of the Committee. Present in the meeting were also the Directors of the Financing and Patrimony Division and of the Human Resources Division. The team members were asked to send contributions for the report to Pro-Rector Irene Montenegro by the 10th November, in order to allow for a draft of the complete report to be prepared and available for the next meeting, planned for the 24th November. An open discussion was then carried out by the Committee members on problems and decisions related to the budget cut in public financing to the University, thus promoting a discussion over a difficult subject requiring decisions concerning cost saving and increased revenues, and stressing the strategic nature of these decisions.

At the meeting held on November 24th, the documents received from the different bodies (Academic Council, Schools, Services/Offices and Students) related either to contributions to the Report or to SWOT analyses performed were checked. The representative from the Academic Council announced that the conclusions drawn from a reflection over the activities of the Council would be presented in a plenary meeting of the Council planned for the 29th November. A short presentation was made on the exercise developed by Services/Offices that performed a SWOT analysis. A page by page revision of a full text version of the Report previously distributed to the Committee members was made. The plan was revised, and objectives and deadlines were set up for the completion of the report. The following meeting was agreed for the 15th December.

At the December meeting, the members of the Steering Committee discussed sections of the report, suggesting modifications and additions or clarifying their intended meaning. An external member with personal experience on EUA assessments was invited to give his critical review on the presented report version. The representative of the Academic Council reported on the presentation of the conclusions drawn from the reflection, in the plenary meeting of the Council which took place on November 29th. The configuration of a dissemination session planned for January 31st, involving the Steering Committee and all members of the Academic Council, was discussed and agreed. Details about the report finalisation and submission were also agreed.

- **Positive aspects and difficulties**

The University regularly prepares several reports with different foci (Annual University Reports, Annual School Reports, Research Unit Reports, Degrees Council Reports, etc.). The only previous institutional Self-Evaluation Report experience was carried out for the evaluation by CRE back in 1997. Although many documents have been produced in the last years over strategic definitions and policies, the Report for EUA represented a different kind of systematic presentation of the University and raised the opportunity to address a different set of questions.

Management and decision-making processes in the University reflect the balance between formal exercise of autonomy-responsibility within the legal and statutory framework, norms and internal regulations and a level of informal agreement on the translation of strategic objectives into policies and programmes.

The emphasis of the external evaluation on the Self-Evaluation Report served as an opportunity for the different and autonomous decision levels of the Institution to reflect on and to acknowledge the difficulties in adjusting local definitions with the strategic definitions for the University.

The self-evaluation process was highly beneficial. The difficulty arose at finding the right level of intervention so as to achieve enriching contribution and also the right level of participation that could guarantee a broader identification with the content of the document.

The Steering Committee members were made aware that their contribution was intended to result from their personal knowledge and experience of the mission and objectives of the University and on the decision processes, and not from their being representatives of singular organic units.

Institutional context

- **Brief historical overview**

A Legal Decree prepared in December 1972, published in August 1973, defined a Programme for the Expansion and Diversification of Higher Education in Portugal.

At the time, Portugal had four Universities located in Coimbra, Lisbon (x2) and Porto. Four new universities were then created, including the University of Minho, together with nine Higher Education Schools and eleven Polytechnic Institutes. This represented a profound reform in the higher education system, overcoming a strong resistance both from existing universities and from sectors of the society that viewed investment in education as a "bad investment".

The Steering Committee for the University took office on the 17th February 1974.

In April 1974, the political revolution in Portugal brought great uncertainty to the University project and resulted in extreme difficulties associated with its financing, the building of its premises, the approval of degree programmes, and the admission and qualification of teaching and administrative staff. The future of the Institution was uncertain for a two year period. The first students were enrolled one year earlier than expected, to enforce acknowledgement of the University's potential and expectations. In the academic year of 1975/76, the University welcomed its first students.

The University adopted a flexible organic model, adequate to the needs of the moment and of addressing future challenges and contributing to the transformation of Portuguese society.

An intensive teaching staff qualification policy was undertaken. Since its foundation the University has sought to achieve a balance between pure sciences, applied sciences and humanities. Degree programmes in non-traditional areas were designed, such as International Relations, Systems Engineering and Teacher Education. The regional profile was also addressed with degrees in the areas of Textile Engineering and History.

The evolution of the student population in Higher Education in Portugal can be observed from official data, Annex-II (Higher Education Student Evolution; Resident Population by Large Age Groups; Evolution of Number of Academic Staff and Number of Students at the University).

The University went through an accelerated expansion in the number of degree programmes offered and in the number of students and members of the academic staff as shown in Annex-II.

The University used provisional premises until 1987, when the first buildings were inaugurated in the Gualtar *campus*, in Braga. The first facilities in the Azurém *campus*, in Guimarães, were built in 1989. Recently, two new buildings have been constructed to accommodate three Schools. The Health Sciences School building is at the final stage of construction. The Law School building has been approved, and its construction started in 2006. The Nursing School and the Student Union buildings are still waiting for approval and financing. This deficit in learning/research facilities should be stressed, as it has been a crucial limitation for many years, hindering the University's offer in several fields.

The first postgraduate degree programmes were opened in 1982, and their number has risen now to more than 50 as shown in Appendix-I (Schools, Departments, Degrees, and Degree Councils; Evolution of teaching staff per Department).

An external institutional assessment was carried out by CRE on the University in 1996/97. An extract of the Evaluation Team Report is included in Annex-I (CRE Institutional Assessment in 1997).

The area of Health Sciences and the degree in Medicine have been part of the University plans since its foundation, but they were only approved by the Ministry for Science, Technology and Higher Education (MCTES) seven years ago. The MD programme started in 2001.

The integration of the School of Nursing (a polytechnic school) within the University in 2004 shows the openness of the University to accommodate polytechnic competences. The integration process was facilitated by the matrix structure of the University, and seeks to make use of the different competences in both the university and the polytechnic degrees. It also paved the way for new opportunities for further integration of polytechnic units.

The area of Artistic Studies was also part of the University's educational strategic plan for a long time. Finally, a first degree in Music was approved in November 2006 and registered in the Ministry in January 2007. Other areas in Artistic Studies are foreseen.

In the near future, it is expected that two additional polytechnic units (Technology, Management), which are now located in the city of Barcelos, at the Polytechnic Institute of Cávado and Ave, will be integrated in the University. In this event, the University will then become tri-polar, and will progress towards becoming the regional articulation agent of Higher Education.

The University has definitely moved towards a high degree of internationalisation, being involved in recently-signed agreements between the Portuguese government and both the Massachusetts Institute of Technology (MIT) and with the Carnegie Mellon University (CMU), oriented towards scientific and technological cooperation and aimed at strengthening the national scientific capacity and the level of Higher Education.

Internationalisation has also been reinforced by the attraction to the University orbit of international R&D institutions, such as the Iberian International Research Institute, and the International Tissue Engineering Excellence Centre. A Confucius Institute was implemented on the University premises in 2006.

To implement its assumed mission, the University has adopted five fundamental, strategic objectives: Region of Knowledge (Minho), *University Without Walls*; Social Responsibility (including Quality); Financing; Rationalisation. Annex-IX (Strategic Objectives) gives a brief definition of these objectives.

- **Geographic position**

The University is located in the North of Portugal in the "province" of Minho. The two *campi* are located in Braga (District capital) and in Guimarães (known as the "berth" of the Portuguese nation), which are 20 kilometres apart. Annex-III (University Premises) shows the locations of the University *campi*.

The *campus* of Gualtar is located in a 45 ha area whereas the *campus* of Azurém is located in a 29 ha area (ha=10,000 m^2).

The ratio of area per student given in this report takes as a reference international standards (e.g. 14 m^2/medicine student, 10 m^2/technology student) which are presently almost achieved.

Other buildings dispersed in the city of Braga still accommodate the School of Child Studies (Convento dos Congregados), during the first semester of 2006/07 and the Nursing School. The Rectory, some Central Services and some Cultural Units (the Archives and the Public Library) are located in the Paço building. Other buildings accommodate other Cultural Units (Nogueira da Silva Museum, Braga; Casa Museu de Monção, Monção).

- **Number of Schools, Research Units/Laboratories**

The University has eleven Schools as shown in Appendix-I (School of Architecture, Institute of Arts and Human Sciences, Institute of Child Studies, Institute of Education and Psychology, Institute of Social Sciences, School of

Universidade do Minho

Economics and Management, School of Engineering, School of Health Sciences, School of Law, School of Sciences, and School of Nursing). The School or Institute designations have the same meaning.

The Pedagogical Laboratories are resources dependent on Departments/Schools.

In the University model, Research Units are not dependent on Schools, and can cross both the Department and the School borders. Nevertheless, Schools should be considered as anchoring bodies of Research Units as they provide the majority of their human resources. Research Units are referred to in Appendix-VI (Institutional Funding over the last five years).

The University also keeps and runs nine Cultural Units in Braga, Guimarães and Monção.

Three autonomous R&D units, private, non-profitable, with strong university participation, are located in the *campus* of Azurém, in Guimarães. They are the CCG-Computer Graphics Centre, the PIEP-Polymer Innovation Centre, and CVR- Residue Valorization Centre.

Recently, two Associated Laboratories (Multi-polar, Research Institutes officially recognised by the Ministry (MCTES), gathering high quality Research Units sharing the same research objectives) were created with the partnership of the University. The first one, founded in the beginning of October 2006, is the IBB – Institute of Biotechnology and Bioengineering – a joint partnership with Instituto Superior Técnico, the University of Trás-os-Montes e Alto Douro and the University of Algarve. The other one – the I3N, Institute of Nanostructures, Nanomodeling and Nanofabrication - was founded in November 2006 and also involves the University of Aveiro and the New University of Lisbon.

- **Number and distribution of students across levels, across Schools, and trends over the past five years**

The University has a management matrix structure. Hence, degree programmes are not managed as School projects since they may draw resources from different Schools. Schools take part in the respective management bodies as stakeholders of the educational programmes. In order to determine the number of students assigned to each School an "imputation model" is used, taking into account the number of students registered and the proportion of the contribution of each Department/School.

Appendix-IV (Student Numbers for the whole Institution; Time-to-Graduation; Dropout Rates; Success Rates; and Employment) presents total student numbers for the University and breaks them down by Schools.

- **Finance: government, other funding sources, and research funding**

The University is a public institution, receiving an annual budget from the State, which is then complemented with own revenues from student fees, research and service contracts.

Appendix-VI compiles information on the University financing. The information concerns the institutional funding to Schools and to Units, excluding staff costs. A comparative map on School Costs from 2002 to 2005, including staff costs, is also appended.

The University Public Budget has been decreasing since 2002. The Operating Ratio defined as the ratio between Staff Costs and the sum of the Public Budget with the income from Student Fees, has been increasing steadily. From a ratio of 78.4% in 2001, it rose to 81.4%, 81.6%, 80.3% and 83.7% in successive years, reducing the amount left to allocate to the "structure". Student Fees rose from 318 € in 2001 to 334 €, 348 €, 600 € and 740 € in the following years.

The increase in revenue from Student Fees has been totally absorbed by the decrease in the Public Budget.

SELF-EVALUATION REPORT

Universidade do Minho

I. Norms and values

1.1. Mission and Goals

1.1.1. Management

Balance in terms of its local, regional, national, and international positioning

The University is a key agent in the regional arena; an important reference in the national arena; and also an interesting player in the European and global arenas. Increasing the international recognition of the University is considered a great challenge and has been generating specific decisions.

Policies and aims regarding international relations

The University is a key agent in the development of its region (Minho). Internationalisation is a strong commitment, reinforcing the concept of the University as a "University within a Region" instead of the concept of a "Regional University". In this sense, the international recognition of the University and its cooperation with and integration in international networks will reinforce its role as an agent of sustainable, regional development.

One objective of the University is to become a reference point in terms of the quality of its teaching and learning in every cycle of the Bologna model introduced in the year 2006/07. The University has a top record on student success rates that it wishes to improve in the highly demanding Bologna paradigm.

The University has adopted the strategic option of becoming one of the leading Portuguese research universities in the near future. Consequently, the number and value of international research contracts should reflect the increased research quality achieved and the effort applied in this area, and the University's private budget will have to increasingly attract financing from research contracts, with emphasis on international contracts.

Degree of centralisation and decentralisation aimed at by the institution

The University aims to achieve a higher degree of autonomy. A tighter level of regulation has been introduced by the Ministry (MCTES) in recent years. This regulation has defined the total number of student places that can be offered each year by the Universities and their internal distribution across the broad scientific areas.

A further restriction of the University's strategic capacity arises from dependence on the Ministry's annual regulatory action that determines which degrees will be publicly financed as well as the number of student places to be assigned to each area of knowledge.

Theoretically, the previous regulatory actions do not conflict with the University's autonomy, given that the University has the option to keep a particular degree even if it receives no public financing. In practice this is not so, since the Public Budget is not enough to cover staff salaries and, therefore, investment from private revenues is required.

Restrictive regulation (*budget balance*) was also applied by the government to the use of the University's own revenues, requiring that the private budget balance is kept the same at the beginning and at the end of each year. This means that any increased revenue from University activity in one year, if not invested in that year, is definitely lost for either strategic or operational applications. This practice, introduced a couple of years ago, is highly penalising for the University; inhibits good management practices; and reduces the ability to set up internally financed programmes oriented towards strategic objectives. Recovering full autonomy over the use of the University's private funding is thus essential for short, medium and long term planning. The ability to raise the level of annual revenues has become an imperative, to ensure covering both salaries and operating costs.

The University Statutes establish a level of autonomy that enables the University to be involved in the constitution of external autonomous entities, subject to Senate approval. The University assumes that any activity not explicitly constrained by the University Autonomy Law is legal (naturally subjected to Senate approval and to being consistent with the University mission). This level of autonomy must be preserved.

Human resource management is constrained by tight legal regulations, such as career recruitments and progressions. The adoption of the individual contract model may introduce some flexibility, but this will be effective only if the University has the necessary financial capacity and autonomy.

1.1.2. Academic activities

Target balance among teaching, research and other services

The University aims to consolidate its position as a Research University. Research activity is mainly assigned to teaching staff. The number of teaching staff members is considered by the Ministry (MCTES) in the yearly budget transferred to the University and is almost directly indexed to the number of students enrolled in the degree programmes offered by the University.

On average, it is considered that at least 1/3 of the activity sef teaching staff is dedicated to research and other services. The University's increasing research activity attracts researchers with grants from the Foundation for Science and Technology (FCT). Nonetheless, teaching is a central concern of the University.

The University's ability to finance the Research Units is very limited and represents about 4.9% of the budget which is distributed to the structure (excluding staff costs).

At present, research contracts represent approximately 15% of the University's private budget. It is important that the University raises the level of financing from its research activity.

Attracting economic activity and research units (both national and international) to the home region is considered to be the best way of increasing the demand for research and development contracts. The University must seek collaboration with regional agents in order to promote joint efforts to create opportunities for regional development.

Approximately 64% of the University undergraduate student population is resident in the home region. This also means that a significant number of students are from other regions in the country. Therefore, the University must provide educational opportunities which are only partially determined by the present regional economic profile.

With the implementation of the Bologna process, and the reduced number of enrolled students due to the shorter duration of the degrees, the second cycle programmes require greater attention in order to attract an increased number of students. This is an important issue in financial terms, and is also a means to reinforce the University's position as a highly internationalised research university.

The University also intends to achieve the generalised adoption of new methodologies suitable to the Bologna principles by ensuring a student-centred learning environment. Although an already significant number of experiments have been made and are under way, the University is concerned with quality improvement, thereby increasing student success rates and personal development.

The University has a long tradition of service activity, contracted as specialised services. These also ought to be increased although they are presently largely dependent on the national and regional economy. To overcome the dependence upon national economy, the University should increase the number of international contracts.

Institution's academic priorities. Teaching programmes and areas of research

Teaching Programmes

The University has adapted 60% of its graduation degrees for the year 2006/07. All graduate, postgraduate and doctoral programmes will be offered by the University according to the Bologna model in the year 2007/08.

Project-Led Learning, active learning, cooperative learning and tutorial supervision are approaches being deployed in many programmes for the last couple of years. The University also intends to steadily strengthen its ability to offer the support of an e-learning platform and to develop the appropriate contents.

The present level of public funding reduces the ability of the University to keep or extend strategic programmes such as the ones previously referred to. The University seeks, and will continue to do so, funding from Programmes set up by the Ministry (MCTES) submitting proposals that fit into its intended quality plan. However, in this process, the University's strategic latitude is reduced and constrained to the specification of those programmes. The financing of didactic approaches by means of contracts signed with the Ministry does not compensate for budget reduction, and, even if the application is successful in a particular year, there is no guarantee that a similar possibility will occur every year.

Areas of research

As previously mentioned, research financing is mainly supported by the Foundation for Science and Technology (FCT). Areas of staff specialisation are first defined by anticipating teaching needs and by identifying areas of research and development.

Research finds its recognition through external assessment, which then attracts financing.

At the University level, and as far as the Rectorate's intervention is concerned, internally financed programmes have been set up to complete or reinforce technological platforms that are in line with opportunities raised and promoted by economic and R&D activity in the area of the University. This is, for instance, the case in the area of Nanotechnologies, of Grid Computing and of Biotechnology.

The University seeks to finance programmes fostering competences that should converge to strengthen the ability to attract research activity and contracts in other strategic areas. This is, for instance, the case of a financed programme in the area of Energy.

The vision of the University for its Research Policy is described in Annex-VII (Scientific Research at the University).

Policy in terms of foreign language requirements for students and/or staff

There are no explicit requirements on foreign language proficiency, but the University regularly offers intensive language courses, both foreign language for Portuguese students and Portuguese for foreign students.

Staff contracted by the University will have a level of foreign language ability depending on their level and field of qualifications.

The setting up of protocols with foreign institutions for joint postgraduate level degrees will surely impose the requirement for formal proficiency in English.

1.1.3. Academic-related activities – Institution's relationship to society

The University has a strong portfolio concerning its relationship with society. This relationship translates into a chain of knowledge built from Research Units. Schools and Departments endorse and develop several initiatives towards the promotion of educational levels of different professional groups in the framework of lifelong education. The cultural role of the University is also highly relevant and considered important to the reinforcement of territorial identity.

In Annex-VIII (Extension Policy), a description of the University's vision concerning its relationship with society is presented.

1.1.4. Funding

The University has increased its level of financing from research contractors from 4,878,867 € in 2002 to 14,791,092 € in 2005. This represents an increase of 326%.

The University also has a good level of specialized service activity that makes a contribution to University financing. The philosophy behind this activity is that the University ought not to enter into the field of direct competition with private companies working in the same field or area. The University should reserve its resources and competences for activities which are not covered by other agents or where other agents can do no better. Budget reductions, however, may tend to distort this principle, and might risk driving the University into a more commercial ground. The University must seek to fulfil its mission concerning its public, social responsibility.

As funding from the public budget decreases, expenses associated to Cultural Units, an added value of the University, which are not accounted for in the budget definition, become difficult to cover.

Raising the external financing for research and development or specialised services is important because it both enables activity, central to the University and that would be impossible otherwise, and contributes to central costs.

The adoption of a full cost accounting system is essential so that all eligible costs, including a fraction of staff costs, can be accounted for and financed by alternative sources.

1.1.5. Other institutional goals

The University is a Public Higher Education Institution. Today, society has a higher degree of expectations for Universities, as public institutions, which imposes a broader and more demanding set of objectives.

Social responsibility is almost an open definition for the mission and strategic objectives of the University.

In this broader view, the University plays a role that interferes with economic and political agents, especially at the local and regional level.

This constant interaction with neighbouring society reinforces the concept of a *University Without Walls*, and makes it more responsible and accountable, and better valued by the same society.

Fostering entrepreneurial activities is just one aspect of the extension activity the University is undertaking. In recent years, the so-called triple helix policy has been established around the world which states that to achieve the highest valorisation of knowledge, a triple-helix of stakeholders must be present: national, regional and local public authorities, private companies and research and development units, most frequently represented by the Higher Education institutions.

1.2. The Context

Selection, appointment, promotion and dismissal of academic and administrative staff; selection of students

Selection, appointment, and promotion of academic staff abide by the specific law regulating the Teaching Staff Career Statutes (ECDU). In turn, dismissal of academic staff is ruled by strict legal frameworks that apply to civil servants in general. These constraints impose entangled deadlocks on the University, given the highly formatted rules that restrict the scope for the strategic management of human resources.

A breakdown of academic staff by Departments in relation to the ratios students/academic staff is presented in Appendix-V (Academic staff numbers (by academic rank and School) for the whole institution, over the last five years).

Institutional autonomy goes as far as defining the profile for a position and choosing the selection jury according to the legal framework. Dismissal of permanent staff occurs only on a disciplinary basis.

To achieve permanent tenure, staff members are assessed after a number of years. They submit a report on their last 5 years' activity and two high-status elements designated by the Scientific Council of their School or from other Schools outside the University, produce assessment reports on which the Scientific Council's decision is based. A proposal to refuse permanent status is rare.

Students are admitted through a national contest run centrally by the Ministry (MCTES). They can apply for up to six degree programmes, in the same or different institutions in order of preference, and are selected based on a composite mark derived from their secondary school education assessment and their final specific examination results– exams that are prerequisites for the degrees of their choice. Vacancies are filled up to the *numerus clausus* approved by the Ministry (MCTES) for each degree/Institution.

Universidade do Minho

For 2006/07, the government has created special conditions for the access to higher education of candidates older than 23 years that did not get the normal prerequisites to enter the University. In previous years, and under the former legal regulations, the University had a very successful experience concerning courses preparing potential ad-hoc candidates for their examinations to enter higher education degrees.

Teaching and learning

There are norms and regulations at the University for either creating or closing Schools, Degrees, etc. Until 2002, the University faced a systematic increase in the number of enrolled students, as happened in all the public higher education institutions. The creation of new Schools and Programmes corresponding to new areas, implied additional academic staff, and was supported by increased budgets.

The situation changed after 2002, with the reduction in the number of candidates to higher education and the significant reduction of the budget assigned to universities.

There are recent examples of programmes closed (suspended) due to the lack of students looking for qualification in certain areas. In general, alternative or reformulated programmes are introduced, thus enabling some reallocation of teaching staff to teaching projects in the same broad area. However, this frequently leads to increasing imbalances, since some developing areas require additional human resources while other areas have an excess of human resources. The stricter Ministerial regulations concerning the areas where Universities can offer degrees often leads to situations where reallocation is impossible, imposing levels of human resources that are not matched by the public budget, indexed to the number of students.

Not renewing contracts with invited teachers, who are contracted on an annual basis, is one of the few tools the University has to control and reduce teaching staff. This has not been sufficient to correct distortions in some areas. It also happens that the individual workload increases despite the lower number of students, because less staff is assigned to the same number of teaching units. Also, there is a limit under which the number of teaching staff is insufficient to assure the running of a programme. This is particularly awkward when the demands of the implementation of the Bologna process are taken into account.

Research

The creation of a specific Research Unit must be acknowledged by the Foundation for Science and Technology (FCT), which periodically calls for the creation of new Research Units. Research Units are periodically assessed every 3-4 years by external, international panels, and are financed at a level that depends on their assessed quality. The assessment outcome for each Research Unit is expressed in grades going from Excellent to Very Good, Good, Fair, and Poor. Those with grades Fair and Poor are excluded from funding and those with grade Poor are closed. As Research Units are mainly financed by FCT, their closing down is an external process to the University.

Some Research Units are not financed by FCT but the University recognises them and provides funding for the development of their projects. Therefore, in these cases, the University has the autonomy to create, restructure or close them.

Development of entrepreneurial activities

All the initiatives that are in agreement with the University Statutes and that do not violate the Autonomy Law of the Universities (LAU) are in principle permitted. Usually, the financial participation of the University in external initiatives (in spin-off companies, science parks and incubators, etc.) is symbolic, but external partners encourage the University to be involved in the governing bodies of external entities. The University has to be judicious over the entrepreneurial activity developed by its academic staff because it may be subject to competition claims by private companies.

Entrepreneurial activity is just one aspect of the extension activities that the University is undertaking.

Funding

The University receives a lump sum that is allocated to salaries and other permanent costs, leaving a margin for operating costs. In its fund allocation the University uses both an accounting perspective based on its public funding budget and an accounting based on its private budget (public budget plus other sources of financing).

According to a rule set by the Ministry (MCTES), some ratios on public funding allocation have to be observed (namely, keeping human resources costs less than a fixed percentage of the level of public financing plus the revenue from student fees). This percentage has been increasing every year, since the public budget decreases, staff costs increase (only due to staff qualification and progression) and the revenue from fees is kept almost constant. This standard reference percentage rose to 85% for the year 2006, but will not be observed in 2007, when the public budget only covers 94% of staff costs.

The progressive reduction in public funding limits the ability to keep visible levels of financing of strategic internal programmes. Also, the "surplus balance rule" imposed on own revenues since 2003 impairs most of the ability to use these funds to finance medium or long term programmes.

Universidade do Minho

Current regional and national labour-market situation

The regional and national labour-market situation is presented and analysed in Annex-X (Regional and National Labour-Market Situation). The Portuguese labour market is characterized by high employment rates, a strong female participation rate and a reversal in the trend of net migration. In Portugal, 55.2% of the active population is employed in services; in relative terms, the North region is more industrialized, although in more mature sectors. Wages, unemployment rate and the proportion of long term unemployment are less favourable in the region.

Infrastructure in relation to the number of students and staff

Located in two *campi* that support different degree typologies, the University has very good infra-structures (considering areas under construction that will be completed by the end of 2007), and the area per student ratio meets international standards.

To achieve the present "comfortable" situation, the University had to invest large amounts of its private revenues to compensate for cuts in the national contribution from the Ministry (MCTES). This was the case with the Health Sciences Building which amounts to 16,170,373 € (10% contribution from the University's private budget) and with the School of Law Building which amounts to 3,629,627 € (30% contribution from the University's private budget). Support infrastructures, such as, gardening, access streets, parking lots and communications, for several recently-completed buildings, were also not accounted for by any Ministry investment programme, and were only possible by further use of private revenues.

The School of Nursing, integrated in the University in 2004, is located in buildings dispersed in Braga, outside the *campus*. This is a limitation for the effective integration of the School in the academic community, and is not appropriate for the intended development of interdisciplinary programmes with the School's contribution. The future School building was for the first time considered in the Ministry investment programme for 2007 but did not receive any level of financing.

The *campus* of Azurém, serving a student population of over 5,000 students, requires a new library adjusted to the University's open access strategy, wireless access and on-line library which are tools for student activity conforming to the Bologna paradigm standards.

Pedagogical facilities require reconfiguration to meet teaching and learning methodologies adequate to Bologna standards. This is, for example, the case of facilities needed to host specific Project Learning methodologies. The need for smaller areas dedicated to more informal and autonomous use requires the reconfiguration of some present larger lecture rooms. In 2006, the University set up a budget allowance, under a Quality Programme, to cover proposals to adapt learning areas to the needs of the Bologna implementation. Further financing for this purpose is indispensable, given that by 2007/08 all undergraduate and most postgraduate degrees will be offered under the new typology.

The University has grown in a permanent "rupture" situation in respect to its premises. For most Schools, teaching of the degree programmes started well before their permanent buildings were constructed. This means that the concern of the University was centred on the premises yet needed, rather than on the maintenance of the already existing ones. The first constructed buildings are now over 15 years old and regular maintenance costs will soon become a permanent concern, requiring maintenance programmes and budget allocation.

The University estate also includes several centenary, historical buildings, which require particular, careful and expensive maintenance. These costs are not covered by governmental investment programmes or the central Ministry (MCTES) budget.

The University plans to promote the efficient use of energy and the introduction of the use of alternative energies, and to become a reference institution in this area in the near future.

Detailed data on the University premises in both *campi* and on dispersed buildings is included in Annex-III.

Student/staff ratio

Reference student/staff ratios are defined by the Ministry for each area, as are student/academic-staff ratios and non-academic staff/academic-staff ratios. These reference ratios do not apply to Schools, but to Degrees. A Degree Programme receives contribution from several Departments and often from different Schools. The way in which these ratios are decoupled to each Department in a School can be seen in Annex-V (Teaching staff per Department; Ratios student/staff per School and Department). As the curricula do not change in time significantly, departmental ratios tend to be steady and do not require frequent computation.

These ratios affect the number of full time equivalent teaching academic staff (FTE) allowed each year for a School and its Departments. The variation in the number of students apportioned to each Department gives the measure of the variation in academic staff numbers in relation to the previous year.

Annex-V computes real ratios of students/FTE. For the academic year of 2005/06, the lowest ratio occurs for the School of Child Studies (5.4), while the highest value occurs for the School of Law (25.5). The overall average ratio for the University was, in 2005/06, equal to 12.3. These ratios are calculated on the basis of first degrees only.

Other constraints and opportunities

Annex-X presents unfavourable economic and qualification conditions for the population living in the University's neighbourhood region.

The country has a very low success rate of students at the secondary level of education, which artificially reduces demand for higher education. The North of Portugal has even less favourable conditions than the rest of the country. This limitation is only overcome by the demographic rise in the region which makes it the "youngest region in Europe".

The number of students completing their secondary level education will necessarily have to rise in Portugal. This is particularly true for the North of the country and for the Minho Region. Demography is also a relative advantage, as the youngest population originates from the North. Even a small reduction in the dropout rate at secondary level education will significantly raise the potential candidates to the University.

The University should make an effort to develop plans for action directed at reducing dropout rates at the secondary level of education in the region. To this effect, a joint effort by the development agents in the region might be one of the appropriate approaches.

Ministerial budget distribution criteria for the higher education system abandoned a formula that never achieved convergence between older and younger universities, in order to adopt in 2006 a distributive approach, departing from a lump sum and considering quality performance factors. However, this quality performance factor is wiped out by the introduction of a regional cohesion algorithm that transfers budget between institutions, in order to guarantee budget variation limits in relation to the previous year. As the University is located in the region with the lowest GDP per capita, this cohesion approach actually implies that the poorer population of the country is paying student fees that are then transferred to other Universities located in richer regions. The stand defended by the University is for a cohesion policy that should be financed from regional development funding and that should not draw resources from the higher education system's budget.

The steep decrease of the student population in the centre and south of the country has triggered a movement towards setting regulatory limits to the number of places offered by each University. This is seen as a means of preserving the number of students which enter universities in country regions with a more significant loss of students.

It is quite important for the University to guarantee that young people resident in the Region know about the University degrees and their quality, so that they make a responsible choice regarding their University education. This has long been a concern of the University, which requires special focus as competition between universities grows.

The capacity and competences installed in the University can and must be oriented towards "new publics" and "unconventional" education, in order to compensate for the loss in the number of traditional students and to recover the level of its necessary budget.

The close links of the University with companies – especially those in the neighbouring region – can be underlined as an advantage. The region, with the economic activity of its small and medium sized industry, is a privileged space for specialised technical training and qualification of human resources. This area is thought to be very important, not only because it also corresponds to the accomplishment of the University mission, but also because it is foreseen as a significant source of revenue. Plans have been conceived to set up what is known as a European Association, operating in the international sphere, in collaboration with Galicia, in Spain, and joining the University with the Industrial Minho Association, and a University and a Business Association in Galicia.

The decreasing trend in University public funding is a major concern. The budget for 2006 was the first distributive budget. A total value fixed by the government was distributed among the higher education institutions based on criteria that claimed to include the assessment of quality performance of each institution. The budget for 2007 followed the same pattern, but was aggravated by an average reduction of 6.2% on the government budget allocated to Universities. For the University, this implies that, for the first time, staff costs are not covered by the public budget. This severely limits the ability to internally finance strategic programmes in the University. Recently, an extra 7.5% increase in human resources costs, associated to the University contribution to social security was announced.

II. Organisation and activities

2.1. Management

Analysis of management practice

The University mission, its structure, its management model and the constitution of its governing and management bodies are defined by the University Statutes. The management structure and model are presented in Appendix-III (Organisational Chart of the Management Structure) and Appendix-II (Organisational Chart of the Central Administration and Support Services).

The Statutes must comply with the Constitution Law and Legislation on University Autonomy, being specified by the University and approved by its Assembly. The autonomy and responsibility of each government and management body draws from the University Statutes and takes the form of Regulations.

The University Assembly, where all university bodies are represented (either directly via their functions or by election) elects the Rector and pronounces on the University Statutes whenever changes are proposed. The University's activity is presented to the Assembly every year, together with the general lines of the planned activity for the following year.

The Senate considers not only the quality and adequacy of proposals, mainly based on previous analysis from the Academic Council, but takes also into consideration issues associated with resources (human, financial and physical) required for the proposed projects. The Senate meets every three months, and all bodies of the academy are represented.

The Academic Council is a key body where Schools, Research Units, Degree Directors and Students are represented, that overviews the scientific and pedagogical competence areas of the University, assesses the quality and adequacy of educational and research proposals, and supports proposals submitted to the University Senate.

Schools have scientific and pedagogical autonomy. General norms and regulations are approved by the Academic Council.

The University Administrative Board is composed of the Rector, who presides, of two Vice-Rectors, of Directors of the Human Resources and of the Financial and Patrimony Divisions, and of the President of the Student Union. The Administrative Board meets every week. The main decisions of the Administrative Board have to do with financial and assets issues.

Proposed Strategic and Programmatic definitions are part of the "action programmes" presented by candidates to the Rectorate, being subject to suffrage every four years. The Rectorate translates the strategic definitions into policies that are submitted to the appropriate governing bodies. Proposals can also emerge from any of the governing or management bodies.

The Rectorate considers itself as having an enabling mission, which includes the analysis of external conditions (threats and opportunities), the preparation of prospective proposals, and the promotion of external conditions favourable to the University's objectives. The Rectorate also has the responsibility to assure that procedures comply with the legal framework and internal regulations. It is also responsible for managing and controlling the University budget and for anticipating a balanced development in all areas.

The University aims at promoting and selecting top researchers and teachers in strategic fields; at increasing the mobility of staff among international reference institutions; and at creating mechanisms to avoid inbreeding. However, the national regulation system (laws and governmental norms) imposes constraints on an effective strategy towards these objectives. Profound changes in the central administration regulatory laws will eventually tackle these issues. For the time being, the University seeks to balance budget constraints with strategic decisions.

In general, the University achieved high standards on the selection and promotion of its staff as can be reflected in R&D achievements (having built a complete system starting from fundamental research and arriving to entrepreneurship companies) and in the promotion and certification of quality in teaching (including teaching staff and students).

The number of academic and administrative/technical staff is centrally determined and controlled. Overall numbers must comply with *plafonds* defined by the Ministry (MCTES) and it must be ensured that the private University budget covers both staff and general costs, also leaving room to finance operating costs. Schools submit proposals for hiring teaching and non-teaching staff within the fixed *plafonds*.

Career positions (Associate and Full Professor) are periodically defined by the Ministry for the whole University, which then allocates *plafonds* to each School/Department. Centrally, a small proportion of positions is kept as a reserve to correct occasional distortions or to promote specific developing areas. Schools usually keep a reserve of their *plafonds* for strategic reasons. The Rectorate periodically reassesses the University situation and determines the opening of the procedure to fill career positions, upon Schools´ requests. Financial constraints are considered in this decision.

The number of technical and administrative staff is also defined by the Rectorate, considering *plafonds* published by the Ministry (MCTES). In 2003, the Rectorate established the number of non-teaching staff for each organic unit (weighting differently each qualification level), and proposals to fill non-teaching staff positions were made dependent on the previous organic and functional definition for those units, and on their adjustment of the proposal specification to this definition.

The overall general budget application plan is prepared by the Rectorate and submitted for approval at a permanent subcommittee of the Senate (Planning and Management Commission). This plan includes the estimate of next year's public budget, the forecast of the contribution from student fees, the estimate of salaries and of general operating expenses. Provision for special strategic programmes and a margin left to be distributed among the scientific and pedagogic "grid" is also indicated. An example is included in Appendix-VI. This is planned by September/October for the next civil year, after the budget is known by August/September. Later in February, as soon as the previous accounting year is closed, the detailed budget distribution is prepared and published.

The amount available for the scientific and pedagogical structure is proportional to reference values calculated on the basis of a weighted scale assigned to the rank of the teaching, technical and administrative staff (Determination RT-06/86) as shown in the imputation model described in Annex-IV (Imputation model; Analytical accounting; Computation of ratios for full-time equivalent teaching staff). This methodology considers the financing needs associated to rank, and assumes that staff allocation to each unit is within the control levels defined by ratio factors and number of allocated students. Schools are free to apply internal criteria for the funding distribution, constrained by the total amounts fixed for capital expenses and operating expenses. A minimum percentage of capital expenditure is usually centrally allocated for bibliography.

Every year Departments submit their proposals for teaching load assignment. This plan is approved by the School Scientific Council, and must comply with the allocated teaching staff *plafond*. Schools also perform the internal funding distribution amongst Departments, to ensure teaching conditions and to cover the running teaching costs.

The Schools' Scientific Councils have the responsibility of analysing and approving qualification plans for teaching staff, and to monitor post graduation or doctoral programmes. The main concern is to assure the foreseen needs for pedagogical areas, but it also takes into account the Schools' perspective on research areas to be strengthened. Schools' Scientific Councils include Directors of Research Units in the scientific areas of the School, thus intervening in the reinforcement of particular research areas.

Degree Programmes result most often from the perception by Departments and Schools of an opportunity and social need. The proposals are prepared and submitted to the Schools' Scientific Councils, accompanied by the evaluation of the other Departments and Schools involved. These processes are then submitted to the Academic Council for pedagogical and scientific evaluation. The final approval is a competence of the Senate, which also takes into consideration strategic and financial factors. Once approved, a degree programme is sent to the Ministry (MCTES) for registration.

Entrepreneurial activities may result from individual initiative, or be promoted either by the School or the Rectorate. In any case, entrepreneurial activity is contracted and approved by the School and the Rectorate, so that responsibility is assumed by the University, the School and the team specifically involved.

Student involvement in institutional governance

The University has a balanced and active student representation in its governmental bodies. Student representatives come both from the Student Union and from elected lists (Representatives to Governing and Management Bodies). Cooperation with these two groups is important to enable them to study and assess proposals submitted to the governing and management bodies where they are represented.

Students participate at all levels of the pedagogical chain. They participate in Degree Management, in Degree Councils and in the Academic Council. They are also represented in the Administrative Board, in the Senate and in the University Assembly.

The level of student participation is regulated by the Autonomy Law for Universities, and by the University Statutes.

Adequacy of human resources, human resource policy and practice

Teaching staff was, for a long time, recruited from candidates with an undergraduate degree (licenciatura). Once admitted as Junior Lecturer, the teacher would have a period of three years to achieve a postgraduate degree (Master's) or equivalent qualification, being then promoted to Lecturer. By the end of an eight year period he/she should have obtained a doctoral degree, being then promoted to Assistant Professor. This meant a very young average teaching staff age for many years while a strong effort was made by the University to qualify this staff. Staff numbers also rose until 2002. Most of the teaching staff admitted in the nineties have reached a doctoral degree, and are now between 30 and 40 years old, as shown in Annex-VI (Age of Effective Teaching and Non-Teaching Staff by Category).

The average age of teaching staff has risen from 38 years in 2001 to 41 years in 2005. From 2001 to 2005, the shift can be observed from a dominant proportion of teachers aged 30-35 to a current prevalence of staff 36-40 years old. The University is reaching what is thought to be a very favourable balance regarding qualification *versus* age.

The little recruitment still occurring is related to degrees which have not yet completed a first edition. The University will grow older in respect to its permanent staff. This might become a drawback when the average age reaches 50 or more.

The prerequisites for new staff recruitment have in general extended to candidates already holding a doctoral degree, and this is expected to become mandatory in the very near future, by governmental career regulations. New admittances occur at an older age, and will increase teacher's aging. Another factor has to do with retirement age and the current unfavourable conditions for early retirement, which will tend to maintain teaching staff up to their jubilation age, at 70.

Teaching staff renewal will become a central problem for the University in the next 10 to 15 years and it will certainly be a serious issue when the University reaches the half century of its existence.

The number of non-teaching staff has increased at a much lower pace than teaching staff. A significant number of the first generation non-teaching staff, occupying key administrative positions, retired by 2002. The existence of a generation gap was evident. Although this fact created some problems for higher management positions in several services it also became an opportunity for renewal and introduction of new competences.

The average age of non-teaching staff has risen from 40 years in 2001 to 41 years in 2005. From 2001 to 2005, the shift can be observed from a dominant proportion of staff aged 30-34 to a prevalence of 35-39 year-old staff (Annex-VI).

By the end of 2002, a decision was made to increase the number of non-teaching staff, mainly at School level. The ratio of non-teaching/teaching staff was then low, impairing teaching, research and service performance. The recruitment of non-teaching staff was accompanied by an exercise on functional definition across Schools. A new increase in non-teaching staff programmed for 2003/04 was suspended due to decreasing public budgets and given the observed decrease in student enrolment.

Universidade do Minho

Adequacy of management policies to the mission and goals

The scientific qualification of the teaching staff has gone through an exponential increase in the last four years. The percentage of academic staff holding a doctoral degree increased from 57% (495) in 2002 to 72.2% (661) in 2005. The policy to promote the qualification of teaching staff was financed by European funding (PRODEP) till 2002. Funding from the PRODEP programme allowed for replacement contracts for a period long enough to ensure the completion of doctoral studies. After this programme ended, the University made an additional effort to complete the qualification of the teaching staff.

Teaching staff career progression was accelerated by opening positions for teaching staff promotions in eight periods over the last four years.

Staff costs are supported centrally and staff reference levels are both defined centrally and discussed with Schools and Services. However, where teaching staff is concerned, the Teaching Staff Career Statutes (ECDU) imposes that invited teachers concluding master or doctoral degrees must be admitted as career staff. In too many cases, this loophole weakens cost control and the consistency of established *plafonds*. Only a change in ECDU may avoid these situations.

From 2002 onwards, the Rectorate has determined that invited teaching staff could only be admitted on annual contracts. This makes it possible to consider all invited teachers on an equal footing when renewal decisions have to be made, observing the *plafond* of each Department/School. This measure was essential, and has avoided admission decisions that were often imposed on simple administrative grounds.

In 2003, the Rectorate asked Schools to list the invited lecturers following master or doctoral programmes and to identify those that were not part of the School's qualification planning for its permanent staff but no case was reported in this situation.

A possible measure would consist of reverting the excess staff costs to Schools by deducting it from their budget allocated for pedagogical purposes. However, this would have a negative implication for teaching/learning quality.

The only way of reducing excess teaching staff is by not replacing those that reach retirement. Sometimes this can result in aggravated, imbalanced staff distribution.

The pedagogical qualification of teaching staff has been the object of internally financed programmes (Quality Programme) that, since 2003, have provided for short staff development courses on new teaching/learning methodologies adequate to the implementation of the Bologna model. However, the pedagogical performance of the teaching staff is not registered or accredited and may not be formally used as a parameter for career progression.

Selection of teaching staff is made through the public call for applications of candidates with a predefined profile in specific disciplines. Calls are open to external candidates. A jury analyses the candidates' curriculum and ranks them according to their assessment.

A strict legal and administrative rule limits the judgement scope of the jury members, who thus hardly abide by the interests of the University. The jury actually determines which candidate the University must contract. The jury can barely take into account any specific profile needed by the University.

The same kind of legal limitations apply to non-teaching staff admittance and progression, which is effected by the public call for a specific profile, for which candidates apply, being assessed by a jury. Selection of non-teaching staff to top management positions also follows a similar procedure.

The Organic and Functional Definition, approved in 2003, set an appropriate framework for the admittance of non-teaching staff to career positions. It also introduced coherence for the re-qualification of non-teaching staff, thus avoiding requests that do not fit the organic structure or that do not comply with the *plafond* assigned to any particular organic unit. Within the University, there is no effective staff mobility, even for reallocation, especially for technical or administrative staff in top positions.

Two tools have been recently introduced which may have a positive impact. One is the SIADAP/SIADUM (Integrated System for the Performance Assessment of Public Administration, and its adaptation to the University), applied only to non-teaching staff since 2005. The implementation of SIADAP forced the definition of objectives throughout the University structure. However, the fact that many non-teaching staff is located in Schools, and depends on an internal hierarchy chain, makes it impossible to consistently separate their objectives from the overall institutional objectives. Non-teaching staff in Schools depend on teaching staff that is not assessed by the same assessment system. A second tool is the celebration of individual contracts with non-teaching staff, which follows a less heavy procedure than the one used for contracting public servants. The contractual scheme is also more flexible. Nevertheless, the perceived contractual flexibility is dependent on the University's financial situation.

The level of financing that the University is able to allocate to the development training of non-teaching staff is insufficient. In 2005, it was 44,436 € which is approximately 0.05% of the private budget of the University.

Selection of students

As previously explained, the University has no say in the process of undergraduate student admissions. The University can not be more selective, and neither can it take into consideration anything other than formally assessed academic competences.

Postgraduate student admissions are assessed by the Degree Management Board on the basis of their curricula, which can take into account factors related to academic and professional experience. Their proposals are then submitted to the Schools' Scientific Councils for approval.

Universidade do Minho

Funding issues

The major weakness of the University's financing is its dependency on the Public University Budget. Along the last four years, funding has increasingly become a critical factor for Universities, conditioning their ability to deploy consistent strategic policies to overcome the dependence on the public budget. The fundamental orientation is towards reducing costs and increasing external funding.

Costs reduction was mainly achieved by a tight control on staff admissions, which kept the University in line with recommended operating ratios, but was also complemented by the reduction in general operating costs. Increasing student fees compensated for a significant proportion of budget reduction.

The University would like to increase private funding, backed by its high percentage of doctorates, but the number of national contracts is limited by the relative weakness of the Portuguese economy. The strategy of the University is focused on regional development, thus helping to create and strengthen the surrounding economic conditions that will act as a funding surplus for the University. For this purpose, the University must have enough funds to become involved in joint external partnerships.

A strong point of the University is its long tradition of working closely with industry and services, whereby a committed relationship with local and regional authorities was developed. This has also happened with the CCDR-N, the Coordinating Council for the Development of the Northern Region, a governmental agency.

The University runs nine Cultural Units, which represents a heavy burden on the University's financing (over 1 million euros/year), since they do not attract any funding to the Public Budget of the University. The University must seek to attract sponsorship, namely for Cultural Units and projects, and get a stronger involvement by the national authorities in the funding of some services, for instance public libraries, that are commonly entirely supported by the State.

Compared to other national Universities, the cost of human resources is low. The operating ratio (staff costs)/ (public budget + fees) has been kept lower than the values of other similar institutions. The University also returned to the level of 6 million euros annual balance of own revenues, increasing significantly above the value obtained in 2002.

The budget for 2007 brings a new situation to the University. This will be the first year when the Public Budget will not cover staff costs. Several measures have to be considered: strictly controlling staff numbers, penalising units exceeding their reference staff numbers; re-arranging the University's organic definition on a sustainability basis; raising revenues from educational, research and service activities; raising overheads of educational, research and service activities; establishing contracts with University units (namely Schools) for the achievement of target results, seeking private funding and donations, attracting private funding for Cultural Activity; increasing the cost of public services rendered by the University; strengthening the ability to apply to national and European funding programmes. On the other hand, cost reduction can not be taken significantly further without compromising the University's activity.

It is then imperative to increase the level of revenues. The upper boundary of student fees is regulated by law. The University has to guarantee that it is able to keep the number of conventional students, and should even make every effort to increase this number, by attracting students to fill its vacant places, and by reducing the dropout rate, especially in some degree programmes.

Advanced courses and short courses are part of an educational programme addressing a new public and may be also a source of revenue.

Teaching/Learning activities

The University ranks in the first three positions regarding student success rates, according to the assessment published every year by OCES (Science and Higher Education Observatory). Also, student surveys conducted internally every year demonstrate students have a good opinion of the quality of teaching and learning.

For the last four years, the University has built up experience from internal financed programmes oriented to the methodologies and logistical concepts required for a successful implementation of the Bologna model. However, a sufficient budget is needed to keep these programmes going in the future.

Teaching and learning activities are mainly organised in degree programmes, which have a management structure dependent on the Degree Director. Degrees are grouped by their scientific-pedagogical area in a Degree Council. The Presidents of Degree Councils are members of School Scientific Councils in the same scientific area, as well as of the Academic Council.

As Schools are the stakeholders of new Degrees and the Degree Director is the project manager, a close communication channel must be secured to detect anomalies, to undertake on-line adjustments and to ensure the follow-up of each teaching project. This is a process that should enhance the assessment of the pedagogical performance of teachers, and that should register the teachers' historical performance and recommendations as well as actions adopted by the appropriate bodies (Schools, Councils, etc.).

The attractiveness of particular programmes to the community does have consequences for student enrolment numbers and on the financing and number of teaching staff. However, the Ministry (MCTES) does not take employability into account when deciding its regulatory action.

This explains why an internal regulatory action on the number of places allocated to the various degree programmes is very difficult, especially when any variation has direct implications on the number of teaching staff.

Universidade do Minho

Development of entrepreneurial activities

The encouragement of entrepreneurial activities has a long-standing tradition in the University. In 1990, an interface was created – TecMinho – to support innovation and entrepreneurial activities. The objectives of TecMinho are: i) the promotion of innovation and the development of new technologies as well as the transfer of technology to private companies; ii) the promotion of R&D projects; iii) the diffusion of technical and scientific information; iv) the support for the creation of new companies, in particular of academic spin-offs.

To fulfil these objectives, TecMinho set up specialised structures, namely, the Office for the Protection of Intellectual Property (GAPI) and deployed a series of activities to promote entrepreneurship, such as courses on entrepreneurship, regular sessions on business plan making offered to all PhD students, regular invention competitions, such as INVENTUMINHO. In 2005, TecMinho created Spinvalor, a spin-off to support new spin-offs. TecMinho submits for registration an average of 16 patents per year and so far, 15 spin-offs have already been created, two of which have already been promoted to start-ups.

Encouragement of creativity is a constant University policy, as is shown by the significant number of international and national prizes awarded to University researchers. In the last 3 years, the University received international prizes in Informatics (from IBM, from Sun and from Toshiba), in environmental technology (the world Lettinga prize), two national Quimigal (the largest chemical company) prizes (one first and one third prizes), and two BES Innovations prizes (one in environmental technology and one in healthcare).

The University has the feeling that its performance on entrepreneurship and innovation has almost reached the maximum level. This comes from the fact that, with present national conditions, it is almost impossible to overcome the figure of 16 patents per year since it will be impossible to sustain a greater number of patents. It would be important to get some support from the government to protect intellectual property, at least nationally. Another weak point comes from too strict regulations: as from each set of 5 spin-offs in general four fail, these four companies need to be discontinued as soon as possible; unfortunately, Portuguese regulations force these companies to maintain their activity for more than 3 years. Another weak point is the lack of seed funding to feed the newly created spin-offs.

The existence of TecMinho is undoubtedly a strong point. Other strong points include the recent protocol signed by the University with IAPMEI to support start-ups, the partnership with other Northern Universities to create a society – CIENCINVEST – to support innovation and provide early-stage funding, and the partnership with Galician Universities to set up a structure for funding innovation companies – UNINVEST.

Research policies

To illustrate how significant the change in research has been along the past 3 years, the average production of publications in international magazines rose from 350 in 2002 to an average of 517, in the period 2003 to 2005, as shown in Annex-VII. The capacity of networking displayed by the University has elicited a very fast progress in research and is undoubtedly a strong point. The networking ability was again in evidence when several Research Units got together and made joint applications for new heavy equipment obtained through the National Programme for the Renewal of Scientific Equipment. Another strong point is the mix between mature/senior and young researchers.

In order to improve research activities, the following objectives were set up for the next 4 years: a) 100% of teaching staff to have a PhD; b) Increase the number of International Scientific publications; c) Increase the publications' citations; d) Increase the number of National and International Research Projects; e) Increase the proportion of Very Good and Excellent Research Units; f) Become increasingly attractive to foreign researchers; g) Convert the European Additional Cost Procedure to Full Costs. In order to fulfil this set of objectives, a number of actions are being implemented, such as the Open Access, and prizes for the best papers issued each year in different areas.

Research Units are autonomous in terms of scientific policy, and are mostly dependent on assessment and financing by the Foundation for Science and Technology (FCT).

The University allocates small funding to all Research Units proportionally to their score, which results from the number of registered researchers. Small Research Units, or Nuclei, have a lower performance, mainly due to insufficient size and ability to develop stronger research programmes. Effort has been made towards moving the smaller or weaker Research Units to different configurations, with little success, given their autonomy. In policy terms, these units should either follow a contract with the University to achieve target objectives, or should be excluded from the University's financing roll.

The University should have the ability to invite renowned academic staff to one year chairs in areas defined as a priority.

2.2. Academic activities

Research and educational approaches

- **Analysis of educational programme design**

Educational programmes correspond to an opportunity which is normally perceived by a group of teachers/researchers. Usually, this occurs in a Department or School, and joins other Departments and Schools that have the necessary competences to contribute to the programme profile.

A proposal for a new degree programme requires statements from several external entities that confirm the relevance and quality of the proposed programme.

Once the proposal is completed, it is discussed and assessed in relevant Degree Councils and School Scientific Councils. The proposal rises to the Academic Council and, finally, to the Senate.

Most Schools and/or Educational Programmes have informal Counselling Councils that include external representatives, usually from professional sectors that correspond to the professional profiles of the eventual graduates.

Occasionally, the creation of new postgraduate degrees results directly from a request from the industrial sector.

Also, occasionally, the Rectorate promotes the design of a degree, to correspond to a strategic definition. Such was the case with Architecture, Medicine and, most recently, with the Music Programme. Ad-hoc Committees are nominated to prepare these proposals.

- **Analysis of organisation of research activities**

Researchers are autonomous, as long as the research they develop can be incorporated into the teaching process.

Teaching staff is, therefore, encouraged to develop research in their subject area in order that the newly produced knowledge discovered through research may be incorporated into teaching later on.

The Bologna configuration of the University degrees will bring about an increased number of students doing research at earlier stages, implying that an extra supervision effort will be demanded from the teaching staff. Several actions are being undertaken to overcome this: the creation of Supervising Committees, tight supervision monitoring, and regular reports presented by the students.

Research activities are undertaken by undergraduate students in many degrees partly in order to attract students to research careers.

A Research Unit or a Nucleus is created upon a proposal justifying its relevance and showing that the necessary number of qualified members is available.

Adequacy of study programmes and research activities to the mission and goals
- **How study programmes reflect the mission and goals**

The University is located in a region with a strong economic activity based on traditional industries, such as textiles, footwear, etc. With reference to technologies, these industries were the basis for the University's growth from the mid-seventies to the mid-eighties. These labour-intensive industries have recently eroded and have a high layoff rate. This has given rise to a negative image associated with unemployment, and caused a systematic drop in the number of applicants to the corresponding degrees. At present, the University is the only University offering a first cycle degree in Textile Engineering. The Apparel Engineering Degree has been discontinued.

The University has a Research Unit in the area of textile materials rated as excellent by international panels.

Though many labour-intensive units are closing, innovative and high-tech units are stable and require qualified graduates. This raised the need to bring together several textile units, which have now signed a protocol. According to this, a significant number of scholarships are awarded and the first employment is guaranteed to students finishing their first cycle degrees.

Degrees in Mathematics, Chemistry and Physics suffer because of the poor background attained by students in their secondary school studies. The University academy is composed of nearly 30% technology and 20% science students, and a high proportion of external activity is linked to these areas. Competence and research in basic science is essential, and are the basis both for science and engineering degrees.

Teacher Education programmes, with a long tradition in the University, also suffered a drop in the number of candidates, mainly caused by the drop in the student population, and by legal constraints on teacher career progression. Teacher Education programmes were changed and the degrees were opened up so as to allow for other professional outcomes. While other Universities started closing their offering in Teacher Education, the University strengthened its position and was able to fill up all vacancies in the year 2006/07.

The University is going through a complete modification of its degree structure to adopt the Bologna Model. This means that more autonomous study will require a set of competences which students do not bring with them from their secondary level education.

The University degree programmes have a good national reputation. The University was the first to introduce degrees, back in 1976, in areas such as International Relations, Informatics, Production Engineering (now Industrial Engineering). In the area of Information Technologies and Communications, the University is the major provider of graduates. The region, mainly in the sub-region of Braga, is known for the number of small and medium sized companies in the informatics and communications sector. The University also has an internationally-recognised degree in Biotechnology.

The quality of the research activity has yielded a number of graduate study programmes, which are increasingly adopting international cooperation and gaining international recognition. This was the case of the Erasmus Mundus Master programme in Civil Engineering, of the joint-Doctoral Programme in Advanced Manufacturing with MIT and of the joint-Doctoral Programme in Bioengineering, also with MIT. An international doctoral programme in Nanomedicine is being prepared together with the Galician Universities, the University of Porto and the University of Aveiro. This doctoral programme will benefit from the presence of the International Laboratory on Nanotechnology, located in Braga.

Furthermore, joint doctoral programmes with the University of Porto and the University of Aveiro were approved at the end of 2006 in the areas of Electronics, Communications and Informatics.

Considering the strategic clusters around which the University considers that the regional development should evolve, the degree programmes offered by the University constitute a solid basis for acquiring science and technology competences.

The region is also rich in its patrimony and culture, and a fertile ground for demand in the Social Sciences and Humanities.

The fact that the University is "project oriented" facilitates the setting up of interdisciplinary programmes. This is particularly relevant under the Bologna reform and most suitable for designing postgraduate level degrees.

- **How research activities reflect the mission and goals**

The existence of a number of too small Research Units should be singled out. There are 8 Research Units with an average of 6 researchers each, which international evaluation panels find difficult to assess on the one hand and, on the other hand, exhibit great productivity oscillations due to their small size. An attempt is going to be made to merge several of these units in order to get a critical mass of human resources.

Furthermore, there is a rather strong imbalance between the Units belonging to Science and Technology fields, quite used to publishing in foreign languages, and the Units belonging to Humanities and Social Sciences, less prone to publishing abroad due to their own nature. The number of research projects is rather low in the Social Sciences, as compared to the number of research projects run by the areas of Sciences and Technologies.

Intellectual property becomes an important issue, to guarantee that research results are protected by patents, generating the necessary return. Knowledge protection requires financial investment at a level that the University is unable to support. The tendency that researchers have to negotiate research contracts with external companies for themselves, giving rise to lower revenues, is another weakness.

The University's cooperation ability has speeded up and is undoubtedly a strong point. This capacity was once again demonstrated when several Research Units were able to get together and make joint applications for the new heavy equipment.

Another strong point is the mix the University has of the maturity coming from several senior researchers with the enthusiasm of young researchers, bringing together the best of both generations.

Internationalisation of research was reinforced by the increase in the number of doctorates. It has always been a policy of the University to invest in the development of the teaching staff.

As the number of doctorates has increased exponentially, especially in the last years, the University's scientific production has been raised to international standards.

This international recognition of the University research competence has been a key factor that has attracted Research Units to the University or to its neighbouring region. Research excellence units and the Iberian Research Institute are some examples. These results comply with the University's strategy of being the primordial promoter of the knowledge chain in the region. Attracting these advanced units increases the demand for qualified human resources, and is also an asset for advanced research to be contracted with the University.

As the University considers the increasing valorisation of the knowledge chain as part of its mission, it has deployed every effort to enable the economic exploitation of knowledge.

This was why the University participated in the creation of CIENCINVEST, an association of Universities and Companies that has the ability to fund different steps in the valorisation of the knowledge chain, including the financial support for technological start-ups.

The University is also a partner in EMPREENDEREGIAO, an association with Spanish Universities and companies, representing 500,000 students and constituting the major European concentration of teaching/research staff.

The University was awarded a large amount of heavy equipment worth over nine million euros (to which more than one million Euros of self-financing was added) under the framework of the National Programme for the Renewal of Scientific Equipment, funded by the Foundation for Science and Technology (FCT).

The purpose of the University is to concentrate this new heavy equipment in joint lab infrastructures in order to share highly skilled technicians and achieve the best possible utilisation of this equipment.

Opportunities also arise from contracts signed between the Portuguese government and institutions such as the MIT and CMU (Carnegie-Mellon University), in which the University is involved. Being joint advanced educational programmes, these contracts also set the framework for student and teaching staff interchange and for joint research.

2.3. Academically related activities

Research and technology transfer, lifelong education, regional and community service

- **Research and technology transfer**

The number and value of national and international R&D contracts has increased significantly in the last years. Contracts from national industry sagged during 2003 and 2004 as a result of the deteriorated national economic situation and only began to increase by the end of 2005. It is worth noting that research contracts with major international and national companies have increased significantly in the past years, providing evidence of increasing research quality and

the effort applied. The University has R&D contracts not only with the leading national companies of many sectors, but also with many leading international companies (Annex-VIII).

- **Lifelong Education**

Almost from the beginning of its activity, the University developed structures oriented to promote cultural and social development of people other than its students. Some Cultural Units have been playing a very meaningful role in the cultural area, with an impact that goes beyond the borders of the region, while others have been performing activities centred in the rising of the educational levels of the local population. For the moment, almost all Schools are developing activities oriented to promote lifelong education among different professional groups (teachers, economists, lawyers, doctors) corresponding to their scientific domains.

TecMinho, an interface created by the University in 1990 to promote the valorisation of knowledge, is one of the structures in charge of the promotion of lifelong education. It provides courses on e-learning, several specialised advanced courses for engineers (eg, recovery of ancient buildings, heat ventilation and air conditioning) and a special course for unemployed graduates.

- **Regional and community service**

In January 2003, an agreement was signed with 18 Municipal Councils, the Regional Industrial Association and two Worker Unions whereby the signatories agreed to commit themselves to undertaking a common policy of regional development. The agreement was certified by the Prime-Minister and was the keystone culminating a series of activities that the University has been engaged in. The University is involved with local initiatives such as Braga Digital, Ave Digital, Minho Digital, the deployment of Avepark - a Technological Park – Campurbis, and Houses of Knowledge.

The extension policy has two parts. The first one is the promotion of entrepreneurship inside the University and the second is the cooperation with existing companies.

Besides constant activity concerning the diffusion of entrepreneurship concepts - business planning, market viability, funding sources, etc – TecMinho is responsible for the Protection of Intellectual Property and for Knowledge Transfer.

Two incubators are currently under construction, one in the town of Vila Verde and another one inside AvePark, the 70-ha Technological Park located in the town of Taipas. These 2 incubators are intended to host the new technology-based companies.

The cooperation with the surrounding socio-economic community started in 1980, when all final year students had to undergo a one-semester training period in a professional environment. This long-term student training cooperation with a significant number of companies has led to the establishment of close links between partners.

The industrial partnerships of the University are so important that 35% of all the consortium projects funded in the country by the Portuguese Innovation Agency are awarded to the University. Currently, there are more than 200 contracts on collaborative research with national and international companies. Concerning the cooperation with existing private companies, the extension policy has recently evolved to a higher level. After having consolidated the cooperation with single companies, and after setting up the technological centres, a new policy was designed, based upon the concept of the virtuous pyramid (Annex-VIII).

Student support services

Annex-XI (Student Support Services) includes a short description of the Social Services at the University. These Services organize and run lodging and welfare support for students, and also run cultural activities and sports for students and staff.

The University has the highest percentage amongst the Portuguese universities of students supported by scholarships which is an indicator of the economic difficulties families encounter in supporting their studies.

The Academy is very active both in cultural and sporting activities.

Adequacy of academically related activities to the mission and goals

- **Weak Points**

Research and technology transfer activity and adjustment to mission and objectives

Small and medium sized companies are often unable to reap the benefits from the University's innovative processes. Most companies have no significant investment in R&D.

Lifelong Education activity and adjustment to mission and objectives

Small sized companies have difficulty in both setting strategic plans and in valuing and paying for human resource qualification.

Community Service and adjustment to mission and objectives

Economic development indicators for the surrounding region are lower than the average national values, meaning that there is less capacity to seek and finance support for specialised University services.

- **Strong Points**

Research and Technology Transfer and adjustment to mission and objectives

The University has a well-proven structure, TecMinho, supporting research and technology transfer. Inside TecMinho a Knowledge Transfer Office is working to support licensing, IPR, and collaborative research. The Carlos Lloyd Braga Foundation provides funding to a visiting professor every year.

Lifelong Education and adjustment to mission and objectives

In the last three years, TecMinho has provided more than 20,000 hours of lifelong education involving advanced courses and also courses for the upgrading of administrative staff. In 2005, TecMinho provided 7,400 hours of training, involving 200 teaching staff and 2,000 attendants. It is worth noting that TecMinho offers, annually, a course for unemployed graduate students. So far, more than 300 people have attended this course. After completion, they were able to find a job.

Community Service and adjustment to mission and objectives

The University has a long tradition of service to the community, and is well-seen, by it. In general, it is correct to state that the University carries out its social responsibility, and is perceived as a competent partner that can be trusted. The University has close relationships and communicates easily with most development agents, being regarded as a cultural agent.

2.4. Funding

Percentage allocated by the State or other public authorities, by student fees, and by private sources

In 2005, the private budget of the University was 99,415,169 € (63% State budget; 11.3% student fees; 11.8% European research contracts; 13.9% services to the community).

Percentage of earmarked State budget allocation

The State allocation is a lump sum where the OE (Public Budget) is concerned. The budget for investment in buildings is earmarked according to a plan that is submitted every year, and that, if approved, can receive a level of financing which is directly related to the contractual terms agreed with construction companies.

In a few cases, contract-programmes are signed with the Ministry (MCTES) for specific objectives (examples are: a national network teaching programme, a programme oriented towards handicapped students, a programme to set up and run a CET – pre-university, technological programme, etc.). Contract-programmes require co-financing from the University, which in general amounts to about 20%.

Centrally controlled budget

The budget is transferred by the Ministry to the University as a lump sum. University human resources costs are supported centrally. The remaining budget is then distributed to Schools, Research Units, Cultural Units, Teaching Programme Councils, Support Services and Central Services based on pre-defined proportions (Appendix-VI).

Distribution criteria and amounts allocated to Schools and Departments

The budget distribution to Schools separates the amounts for capital investment and operating costs. Distribution to Schools is based on their score determined by the number and qualification of their staff.

Capital financing of Schools consists of a sum directly distributed by points, and an equal sum which is reserved to finance applications from Schools (Special Capital Funding). While the base distribution can be allocated by whatever criteria the Schools decide, this special funding requires a justification, and is assessed on the basis of its interdisciplinary context and takes into consideration the level of co-financing proposed by the School. Special Capital Funding was reintroduced in 2003, and the University has been able to keep it going up to 2006.

Additionally, the Quality Programme, introduced and kept up for the last few years, considers financing applications which meet specified criteria and cover several vectors related to quality.

A Special Funding for Research was introduced in 2006, to consider a maximum of five applications. This funding intended to reinforce the University's capability to make better use of equipment acquired through selective funding from the Foundation for Science and Technology (FCT). The special funding was restricted to joint applications from at least two Schools.

Allocation procedures within the University

Schools are free to allocate their basic budget, within the constrained capital and operating costs definition. They must also invest in bibliography - at least the minimum percentage of capital budget as defined by the Rectorate Resolution concerning budget distribution.

The R&D budget is both internal (from the university) and external (from national and international sources). The University's funding is proportional to the number of its researchers and takes the scientific area of the Unit into consideration. The level of funding from the University always depends on the national budget distributed by the Ministry (MCTES) to the University, and is intended to support basic running costs (administrative support, general costs, etc.).

External funding comes from international projects (mostly EU programmes) and from national institutions. This includes project funding, PhD scholarships and multi-annual funding from the Foundation for Science and Technology (FCT), which represents the most significant amount and is indexed to the result of the international assessment of each Unit.

Research Units distribute their budget using three main rules: a limited amount of basic funding, based on the number of researchers in each Unit; an amount supporting strategic projects in specific fields or specific types of projects previously defined by management; a lower amount to management for the exploitation and dissemination of Unit project results and, in some cases, some extra support for projects.

The first two rules receive at least 80% of the available budget. The strategic funding application is defined by each Unit. In technological Units, the general policy is to support small projects based on their interdisciplinary nature, focussing on pre-defined strategic areas and supporting young researchers. For strategic funding, only the internal funding and the Foundation for Science and Technology (FCT) multi-annual funding are considered.

The income from overheads of funded projects (national or international) does not contribute significantly to the overall funding, and varies each year. However, this value is increasing, especially in the most active Units (in technological areas). Several Units do not charge any overhead. The University charges 10%, a percentage that will soon be increased to 20%.

Internally, Funded Programmes are centrally controlled at each Research Unit to guarantee that the application plans (submitted and approved) are followed.

Budget percentage available to implement new initiatives

Every year, the University leadership proposes to the Planning and Management Committee (a permanent Committee of the Senate) an application plan where specially funded programmes are considered. The amount used varies, and is dependent on the public budget allocated to the University. As an example, the Quality Programme received 1 million euros in 2004, 0.5 million in 2005 and 1.3 million in 2006 in a global public budget of around 60 million euros. The year 2006 also saw the special funding for research tagged at 0.75 million euros (covered from the University private budget). Strategic programme specification is detailed and published, after the main budget allocation, by March/April.

Strategic internal funding of programmes is directed towards reinforcing areas that can improve the University response to opportunities. This is the case of the Iberian Research Institute to be installed in Braga, centred in the field broadly designated as Nanotechnologies that led the Rectorate to set up an 850 thousand euro Research Programme in 2005, in order to reinforce its technological platform. This is also the case with the Energy Sector, where the University is investing in order to focus its multidisciplinary competences. The Energy Sector is considered to be a strategic area in which the University should be well positioned in the near future.

Full costs of research and teaching activities

This study is being currently undertaken and is not yet completed. An evaluation of the private investment made in ICT infrastructures in recent years has been accomplished. The allocation key for overhead estimation was approved by the Foundation of Science and Technology (FCT) and more recently, at the end of October 2006, this was also approved by the Innovation Agency. The adoption of a full cost system waits for final negotiation with the European Commission on the fraction of the wages of scientific, technical and administrative staff to be allocated in the context of full cost accounting.

Perceived strengths and weaknesses of funding

The University has a "comfortable" level of its own revenues from student fees, research contracts and services.

The region is characterised by its entrepreneurial activity. However, the economic activity is still too dependent on traditional, labour-intensive industries, e.g. the textile, and footwear industries. The region has the highest unemployment rate of the country, and a number of factories closed down and moved abroad to countries with less expensive labour costs. The difficult national, economic situation having lasted for several years, also affects the ability of companies to finance contracts with the University.

The reduction in the overall number of students enrolled also reduces the revenue from fees, balanced only in nominal value by raising the student fees to the maximum level permitted by law. When student fees were first substantially raised, back in 2003, the University observed a drop on the number of student admissions related to domestic economic difficulties, being in a region that presents the lowest national levels of Gross Domestic Product (GDP).

The obvious actions have been adopted, such as publicising the University and promoting its image, guaranteeing that potential candidates in the region know what the University offers and are able to recognise its quality.

A more ambitious line of action contemplates active University promotion of the diversification and innovation of companies in the region, the anchoring of new clusters, and attracting advanced and international Research Units, thus seeking to help change the sustainability of the regional economy.

- **Weak Points**

The implications of decisions at School level that affect the level of expenses centrally supported by the University ought to be reflected on by the Schools.

Career progression and new admissions must be based upon School decisions in order to enforce their strategic nature. However, a reduction in the operating budget allocated to Schools may result in weakened support conditions for teaching activity, with possible quality implications.

Universidade do Minho

It is important that middle-level management sees autonomy as the freedom to take decisions within their set of competences, but that there are consequences (including financial implications, human resources levels and career progression) that directly affect the units under their responsibility.

- **Strong Points**

The University has a good cost structure, when compared to other higher education institutions.
The matrix structure is the basis for a rational cost management practice, which releases funds for creative activity.

- **Opportunities**

There is an opportunity to introduce contract-programmes with Schools in order to establish teaching and research objectives, levels of financing and of School revenue generation.

III. Quality practices

Internal quality processes and practices have long been adopted for teaching projects (educational programmes). These quality processes include data gathering and an evaluative judgement concerning the activities of the Institution.

3.1. Internal quality responsibility shared across the Institution

The learning/teaching activities have a specific management structure which includes: a Degree Committee for each degree, coordinated by a Degree Director, with a similar number of teachers and students, which monitors the progress of the students and assures the teaching quality; a Degree Council for each group of related degrees, which promotes the coordination of the scientific and pedagogical management; the Academic Council responsible for the pedagogical and scientific policies; a Pro-Rector for Assessment and Quality of Teaching; an Assessment and Quality of Teaching Office (GAQE); a Vice-Rector for Graduation and Post-Graduation Studies.

In 2004, the Rectorate set up the Assessment and Quality of Teaching Office (http://www.gaqe.uminho.pt) that plans and coordinates the evaluation procedures and interacts with the National Evaluation Agency. This Office also plans, coordinates and interacts with a broad set of programmes oriented towards the promotion of pedagogical competences and the introduction of teaching and learning methodologies. The Office is also involved in devising questionnaires, collecting and interpreting data on student and teacher performance (about 120,000 per year), and a satisfaction survey (*via* web) addressed to teachers once a year to enquire about their working conditions.

The University also responds to the needs of disabled students through a Support Office for Disabled Students (GAED), whose mission is to embrace and include all students with specific handicaps in academic activities.

3.2. Explicit quality standards. Quality culture

As far as the University of Minho is concerned, internal auditing is the direct responsibility of the Rectorate.
The quality standards defined below were translated into goals and result from the SWOT analysis carried out across the University, covering Schools, Services/Offices and the Academic Council. The standards were assigned to those activities considered central to fulfilling the mission of the University. Along with each item, the current position, according to the grading defined, is indicated.

Pre-defined standards were used as a preliminary assessment of the current situation, taking the year 2005 as the starting point and 2010 as the upper limit for total fulfilment. The grading is marked as distant (D), when the defined goal is far from being attained, half-way (HW), if the goal is on its way to being attained, close (C), when the internal standard is about to be attained, or achieved (A) if the internally defined standard is achieved or even surpassed. Several of the standards were included in more than one heading, since the interaction between teaching, research and internationalisation is very strong.

Teaching: failure rate below 15% (HW); less than 5% dropout rate (HW); 3 months at most to officially approve new degrees or other kinds of education (D); 90% of PhD degrees among School staff (C); 100% teaching staff using new learning methodologies, namely e-learning (HW); special courses offered in all Schools (D); lifelong learning in all Schools (D); recognition of experiential learning in all Schools for students over 23 years old (D); above 90% of employment for all graduates (C).

Research: to embed teaching in a research-based environment (undergraduate – D; postgraduate – C/A); over 60% of 2nd and 3rd cycles run in English (D); above 10% foreign graduate students (HW); around 3 international publications/FTE/year (HW); over 4 Associated Labs (HW); 80% of PhD degrees with European Label (D); over 5 Joint International and 10 Joint National PhD degrees (HW); above 80 International Projects/year (HW/C); above 350 National Projects/year (C); above 15 National Congresses/year (C); above 6 International Congresses/year (A); collaboration with 50 of the Universities belonging to the 100 best international universities (C).

Internationalisation: International Master degrees covering 10% of the 2nd cycles (D); over 5 Joint International PhD degrees (HW); over 60% of 2nd and 3rd cycles run in English (D); Collaborative Programmes with all Continents (HA/C); University Networks encompassing all Continents (A); hold both ECTS label and the Diploma Supplement label

(A); balanced exchange mobility Erasmus Programme, with more than 400 students IN and 400 students OUT (C); collaboration with 50 of the Universities belonging to the 100 best international universities (C).

Administration: 100% of the administration staff with basic computing skills (HW/C); multifunctional staff (D); digital management of document classification and archiving (D); instant response to auditing requests (D); cost-effective management of water, energy, communications, wastes (HW); full costs accounting procedures (HW/C); fund raising reaching 3% of the University's overall budget (D).

Extension and Entrepreneurship: create more than 25 spin-offs /year (C); more than 6 start-ups /year (HW/C); over 25 patents/year (C); over 15 international R&D contracts/year (C).

Social Services: global policy of social responsibility, concerning inclusiveness of all kinds of minorities (gender, disabled, ethnic, people with special dietary needs), health and psychological support, safety, eco-efficiency (C); certification of all food processing and catering facilities (C); quality and diversity of meals (A); dormitories for 15% of the student population (C); top 5 Iberian universities in sport performance – over 60% of students as regular sport practitioners (HW); over 15 Olympic athletes in the University (HW/C); the Portuguese university with the greatest number of medals and championships (A); the host of at least 1 International and 5 National sports competitions/year (HW/C).

3.3. Adequacy of resources available to support internal quality processes

For the last three years, and despite the significant decrease in the public financing of the University, the Rectorate has been able to direct a special budget to stimulate the development of projects regarding the improvement of the quality of teaching/learning.

3.4. Available internal quality processes, activity evaluation frequency, extent of data collection

Teaching activities

Each year, the Degree Director produces a report on the progress of the learning/teaching process, which includes data on the course units and recommendations. This report is analysed by the Degree Council, issues needing correction are identified, and measures are taken as a result of the assessment.

All relevant data is included in the so-called "Unit File" and "Degree File", which are updated by the teachers and Degree Director respectively. These instruments provide much of the necessary information used in self-evaluation reports and also by teams of external evaluations.

The Assessment and Quality of Teaching Office promotes the quality of undergraduate and postgraduate studies and encourages the development of projects leading to the valorisation of the students´ education by monitoring their academic performance and promoting the acquisition of soft skills.

The National Evaluation Council has evaluated the degrees of Portuguese universities in all areas since 1993. Two 5 year evaluation cycles have been completed and, hence, on average, each degree programme has gone through two external evaluation procedures.

The self-evaluation report is prepared by an appointed internal committee (which coincides mostly with the Degree Committee). It is approved by the Degree Council and by the Academic Council. Then, it is sent by the Rectorate to the National Evaluation Council.

A 2 to 3 day visit of an External Committee takes place, when the team has the opportunity to visit the premises, meet with members of staff and students and access more detailed data related to the degrees under evaluation. The University receives a written report to which it is allowed to react. Finally, a report of each study domain is published.

In some areas, due to professional reasons, evaluations from Professional Associations are carried out. Procedures are similar to those of the National Evaluation Council although with a clear professional emphasis.

A survey is administered to the students every semester to enquire about the quality of the learning/teaching process. This provides valuable feedback about teaching effectiveness and is an important instrument for monitoring quality. The responses are optically read and statistically analysed at different levels: University, School, Department, Degree Council, Degree and individual teacher. The same items are addressed to the teachers in a similar questionnaire.

Based on the data centralised at the Academic Services, the Assessment and Quality of Teaching Office provides statistical information regarding the success rates on every course unit for all degrees, to the Degree Directors, Presidents of Schools, Presidents of Degrees Councils, and Academic Council. These statistics, combined with the dropout rates and the results given by the questionnaires applied to students and teachers are very important instruments for diagnosing problems in units and degrees.

Research activities

The University assesses the evolution of its research quality by applying the evaluation criteria used by the Foundation of Science and Technology (FCT) to each Research Unit. It also uses several criteria borrowed from the Research Assessment Exercise used in the United Kingdom. Regular meetings and permanent contact with the Research Units help assess the evolution of each Unit. The reports coming out from the External Advisory Board of each Unit are analysed centrally and, following recommendations, remediation meetings are held with the Unit.

Student performance

According to data obtained from the Science and Higher Education Observatory (OCES), the University has had a high success rate during the last few years, occupying first positions in the national ranking.

Appendix-IV shows comparative data for national universities for 2002/03 and 2003/04. Although values for 2004/05 have not been published yet, it can be added that the University had a success rate of 71%.

The University had dropout rate records of approximately 10% in 2005/06, a much lower rate than that observed in foreign and other national institutions. Typically, larger dropout rates are observed during the first two years and with more prominence on the male students. Appendix-IV shows relevant data for the last four academic years obtained both by the University and the Science and Higher Education Observatory (OCES).

Approximately 55% of the students complete their degree in the defined duration period, which is above the value observed in other Portuguese universities (Appendix-IV).

The University is presently developing an Employment Observatory to follow the career and occupational trajectories of their graduates, which is expected to be fully implemented only by July 07. Hence, for the Self-Evaluation Report, surveys of the employment situation covered some degrees not having immediate entry to a State career (this being the case for secondary teachers, medical doctors, and nurses).The Academic Services provided the total numbers for graduates in each degree. The Degree Directors sent a questionnaire to the respective graduates and the responses were collected (Appendix-IV).

Administrative processes

The University provides an on-line information flow application (http://intranet.uminho.pt/) which enables the identification of the whereabouts and state of the documents currently in the management structure.

It is also possible to access the institutional archive, as well as the legislation of interest to the institution and personal data of staff members, via *intranet* upon *login*.

The budget management through the structure of the University is carried out by an application, *via web,* which allows the identification, at any time, of various data, such as expenses and credits.

The University also offers a site (http://alunos.uminho.pt/), where students can find relevant information concerning their personal data, classification records, examination dates and rooms, and where the registration for exams can be carried out. Furthermore, this site can be used for the payment of fees and other procedures and for the recording of extra-curricular activities undertaken by the students to be registered in the Diploma Supplement. Access to this page is through login/password.

Entrepreneurial activities

The success rate of entrepreneurial activities is easily assessed by the number of spin-offs created, the number of spin-offs that have been promoted to start-up companies and the funding collected to finance these activities.

External relations

The success of external relations can be measured through the bilateral agreements signed with the best European and non-European universities according to the *Times Higher Education Supplement*, and through the networks the University is involved in.

3.5. Use of internal quality process outcomes in decision making and strategic planning

Administrative quality

Every two years, the University is submitted to external audits by specialized firms to assess financial and procedures management. The recommendations regarding any corrections are internally implemented by Rector Dispatches.

The University promotes, internally, regular meetings with administrative staff heads in order to assure the normalisation and uniformity of procedures. Procedure manuals for several administrative areas are developed with this objective.

The University offers an on-line claims/suggestions system, accessible to the whole academic community, which enables direct evaluation of the procedures undertaken and the promotion of their quality.

Teaching quality

Anomalies are detected from the outcomes of internal quality processes related to teaching. These are analysed by the Degree Councils, which promote the necessary and feasible actions to correct them, as long as they are simple operational difficulties. There are general norms regulating student assessment.

Teaching anomalies related to scientific, pedagogical or other performance difficulties are dealt with by the Degree Councils with the Degree Management, the Schools and the individual teachers. These are all "informal" actions, and are not registered in any kind of historic memory of teaching staff performance.

Both the cyclical and the permanent monitoring of the pedagogical process enable the detection of anomalies in the way pedagogical units are run. Success rates and dropout rates are registered and the Pedagogical Councils and the Schools involved are confronted with both the statistics and with student claims, when they occur. It is on the basis of informal communication from the Pro-Rectorate for Teaching Quality with both the Pedagogical Councils and the Schools that corrective action is sought.

The small number of permanent pedagogical-unit problems has long been identified, and the causes are known. However, there is no direct means for the Rectorate to act, either to punish or to reward pedagogical performance, except when general regulations have not been followed.

The recurrent, individual cases are a permanent cost to the University, and weaken the reliability of the monitoring of the pedagogical process and all the teaching quality improvement process. The fact that students refer to these few situations as demonstrative of the ineffectiveness of the control system, ignoring all the others, might justify a gradual lack of their involvement in the monitoring process. Obviously, these situations require careful assessment to avoid corporative student stands that might not be related to a true underperformance of the teacher.

Associated to this, the pedagogical performance of teaching staff is not registered and cannot be formally introduced (by law) as a curricular component in any assessment for tenure or for career progression.

This raises the problem of how to render true the statement that teaching activity is an important element for career progression.

Annex-XII (Scientific pedagogical grid; Academic Council: a reflection on the current situation and scenarios for its future; Stakeholders´ self-evaluation (Schools, Services/Offices and Students)) describes the scientific-pedagogical grid.

Research, entrepreneurial activity, external relations

As mentioned earlier, the evaluation of research is done by external evaluation panels and as a consequence of the evaluation some Research Units may be discontinued.

IV. Strategic management and capacity for change

Responsiveness to the demands, threats and opportunities present in the external environment

Compared to universities organised as Faculties, the University has the ability to present itself as a single unit and can state an institutional strategy. This is a result of the matrix structure which is an advantage that Schools do not always take on board.

While other universities are trying to do the groundwork for interdisciplinary approaches to educational projects, the University has 32 years of practice, which is a clear advantage.

The University is not sufficiently responsive to threats. There is a time delay between perceived threats and the time when deadlines are established to achieve imperative targets.

Strategic definitions often have to do with resource management. The experience is also that the Ministries do not stay in power long enough to fully carry out their stated policies. This encourages the structure to resist some changes, and to wait for possible changes in orientations.

On the other hand, the institution is very responsive and cooperative when deadlines are set by the Ministry (MCTES) even though a huge effort is needed to be able to comply with the tight schedules imposed.

"Traditionally" the General Directorate for Higher Education regards processes submitted by the University of Minho to be well prepared and complete.

Ministerial instability and lack of policy definition are unlikely to promote a responsible attitude from institutions. It does not pay off to have good management practice, and the academy may well misunderstand any anticipatory action taken.

Most of the implications that result either from changes in the context in which the University has to develop its activities, or the implications of Ministerial laws and regulatory action, are not clearly explained to the Departments and to individual staff. Operational conditions are not sufficiently clarified and strategic objectives are neither explained nor sufficiently translated.

From the Rectorate point of view, the great challenge is how to persuade middle-level management (Schools/Departments) to undertake commitments in line with the stated strategic objectives.

Another limitation is the difficulty in convincing Schools and Services/Offices to adopt the predefined quality objectives.

It is obvious that financial incentives are as important as compromises with Schools and Services/Offices when trying to lead them to enforce internal objectives consistent with institutional objectives.

The level of financing available to set up incentives is almost non-existent, in face of the insufficient public budget attributed to the University.

Involvement of representatives of the external community concerned with strategic management

Schools, Degrees or Departments have set up Advisory Councils that include external individuals, knowledgeable on degree design and adjustment, which can also enhance the global activity of Departments/Schools.

The University Senate Regulations allow the Rector to include up to nine external members, thus bringing an external dimension to the Senate. Mayors of the two cities in which the University is located have been a permanent presence.

The University Cultural Council is a counselling board that advises the Rector on the cultural policy of the University. The full Cultural Council includes 12 external members, representing different cultural areas and the region.

The University also participates in several autonomous (external) interface units, and has set up an informal Council of Interfaces whose main purpose is to help combine efforts for greater, more effective University action in the community.

The Rectorate created a Strategic Council in 2004. This organ is composed of all the members of the Rectorate Team and eleven others. Nine of these members are external to the University, and were invited onto the Council given their profile and extensive experience, covering areas such as: Culture, Financing and Entrepreneurship, Teaching/Learning, Internationalisation, Globalisation, Innovation, Development and Prospective. Meetings were held in May 2005, November 2005 and July 2006. These meetings have been very important to the Rectorate, since they require the preparation of base documents to present and discuss strategic definitions, difficulties and projects. Simultaneously, the external members of the Strategic Council gain knowledge of the University's performance and orientations which they are able to pass on to their professional circles. The members of the Strategic Council are not exclusive to the region, and come from several locations in the country.

The Rectorate creates informal Councils whenever necessary to deal with cross areas which are either transversal to the organic structure (such as the Schools Council) or that address specific strategic developments (such as the e-UM Commission that supervises the institution's policy on its information and communication technologies platforms). These are, at present, Councils that include only internal members.

The University's objective of improving its position in the Energy area led to the creation of an Energy Committee. A contract for an external advisor was made with the Carlos Lloyd Braga Foundation.

Expected changes towards the Institution's aims

The University expects that the region will quickly evolve towards a knowledge based economy, by attracting advanced technology-based companies and research and development centres in areas that reinforce or create important clusters. The reorientation of traditionally labour-intensive industries is expected to create a demand for advanced research and innovation.

The University expects that its research activity will increasingly attract internationally- and nationally- funded projects, thus contributing to the University's funding. Mobility, especially teacher-researcher mobility, is expected to rise significantly.

Learning from its current international educational programmes, the University will be able to increase its level of internationalisation and reinforce its network links with international top quality institutions.

The level of University intervention in the development of the neighbouring region will increase, the region offering a privileged field for conceptual technical and cultural projects.

An even greater University intervention in the external entities of the knowledge chain is expected, translating the effective importance of the University into development.

Study programmes, research and services geared towards society in order to better match current and future missions and goals

The University feels that a major difficulty it faces is the decreasing level of public financing, which is not compensated for by an increase in economic activity. The State Funding Policy for Higher Education requires stability and reliable definition so that Universities can define their financial equation and establish their options.

The University considers that it has a strong strategic definition of its mission and objectives.

Some of the University's objectives depend on external agents, and the University can only generate concepts, ideas, projects, and seek to attract economic and political partners. The existence of a politically legitimated Regional Development Agency centred on the Region (Minho) is important.

A more flexible legal framework for human resource management is essential.

A new legal Teaching Staff Career Statutes (ECDU) is needed since the present one is a permanent source of limitations to the University. Staff selection and career progression are cumbersome processes which do not guarantee the Institution's best interests.

Once a minimum level of stability is achieved, the University must revise its offer of degree programmes, meaning that non-government-financed programmes, or programmes which represent permanent University investment, will only be maintained on the grounds of strict strategic justifications, adopted by the University as a whole.

The University should have sufficient financial ability to promote new research areas or to support recovery plans for areas where a better performance is required.

The University's autonomy should be genuine, derived from what the law states for University Autonomy. The University must be free to manage its surplus funding, and must be allowed to manage its funding resources using a multi-annual horizon.

Some objectives should be attained via contract-programmes with the Ministry (MCTES), on a reliable basis.

Internally, the University must reinforce its "project oriented" model, to take the best advantage of its structure and management model.

Role of quality monitoring and quality management in the development of change

The University set up and developed an Information System, operating since 2002, which has dramatically changed communication, information, and the way processes are managed. However, in a matrix structured organisation, the information system is a key element, and permanent effort has to be made to expand and consolidate this support structure.

Monitoring is essential, being the basis for permanent quality improvement, but so is the need to devise mechanisms that materialise compromises with Schools on the achievement of performance levels (administrative, educational, research).

The ability to allocate financial incentives tied to objectives, and/or to impose penalties for failed targets, is essential to add credibility to quality management.

Summing up the above conclusions, complemented with the SWOT analyses undertaken by the internal stakeholders of the University, as included in Annex-XII, which show how the University is seen from the Schools, Services and Students points of view, it is possible to formulate an analytical summary presented on page 25 of this Report as a global SWOT.

V. Special focus – Implementing Bologna

The University's Special Focus choice is Implementing Bologna. Practically all educational programmes have been reconfigured according to the Bologna model.

Student success is a main concern of the University, which has an excellent record registered by the Science and Higher Education Observatory (OCES).

The University considers that crucial aspects have to be monitored and that preventive actions should receive high priority. Monitoring the teaching/learning process is essential, as in a new model the standard and established procedures may miss anomalies which may cause irreversible damage to the students' learning objectives.

In the late 90's, the University became aware of the challenges Higher Education faced in order to meet the objectives of the Bologna Process, and developed a plan to clarify its qualification structures.

It recognised the importance of the European Credit Transfer System (ECTS) and of the correct application of its instruments. Hence, the University participated in 1994/95 in a pilot program in the area of History and since 1995 has initiated a gradual and systematic implementation of the new credit system to its degree programmes.

Although there has not been any special financial support from the government, the Rectorate launched a Quality Programme which has allowed a special annual budget to promote pilot programs in several degrees under the Bologna model. It also managed a budget for the acquisition of equipment and the adaptation of the facilities to the new learning paradigm.

This programme has also allowed the promotion of staff development programmes since 2004, concerned with the Learning/Teaching Methodologies, Curriculum Development and Evaluation, Supervision of Theses and Dissertations, Social and Organisational Relationship, Behaviour and Communication Techniques. The staff development courses delivered by national and international experts were initiated in 2004 and since then 60 courses have been offered and about 900 registrations received. http://www.gaqe.uminho.pt

The Rectorate also encourages staff members who have attended staff development courses in this area to run special units which provide students with soft skills that enable them to carry out autonomous study. These units are specially directed at 1st year students who started their degrees in 2006/07 but it is expected that they will be available for all students in the near future.

It should be emphasised that this first group of pioneer staff members (approximately 15) are setting up a Centre for Supporting Autonomous Learning. Simultaneously, the Academic Student Union, in a partnership with the Rectorate, has organized a programme of non-formal education for the 1st year students who started in 2006/07. The programme involves several events throughout the academic year and aims at every participant acquiring the necessary attitudes, values, skills and knowledge for a successful academic life. In this programme, older students coach the newly arrived colleagues after having attended a workshop run by specialists in non-formal education.

The e-learning platform associated with a wireless system serving all locations of the University has largely contributed to the new models of learning. A protocol between the University and some information technology firms allows students and members of staff to buy portable computers at a very reasonable cost.

Another project encouraged by the Quality Programme is oriented towards the development of software components and agents to support learning in laboratory classes in the areas of Sciences and Technologies, and involves several Departments of the Schools of Sciences and Engineering. These software contents are the basis of "virtual laboratories" whose availability on the internet is of importance for the e-learning methodologies and contribute to autonomous learning. Another advantage of these instruments is the possibility of carrying out experiments that

otherwise would involve chemical or biological risk or that would have to be performed with the use of very expensive equipment. http://vlabs.uminho.pt/default.htm

In February 2005, the government issued legislation on the establishment of the instruments to support the implementation of a European Higher Education Area, such as the creation of a new credit system (the European Credit Transfer System), the implementation of the Diploma Supplement, the adoption of a comparability European Scale of Classifications and, in the context of mobility, the Transcript of Records and Learning Agreement.

In 2005, the Academic Council defined the principles necessary to adapt the degree programmes to the Bologna model.

To ensure the European credits are applied correctly, a student survey on the number of hours needed for self-study in each course unit took place and the results supported the restructuring of the curricula. The European Credit Transfer System is used in all mobility activities and it has been extended to cooperation with third countries. An ECTS information packet is available on-line from the University website, which further promotes the transparency required for the mobility of both national and foreign students. http://www.gri.uminho.pt/Default.aspx?lang=eng

All degree programmes and course units have been characterised in terms of learning outcomes since 2005. The teaching staff had the opportunity to attend workshops and tutoring sessions that allowed them to become familiar with the meaning and the importance of the learning outcomes.

In the 2006/07 academic year, 60% of the 1st degree programmes have been configured. In 2007/08 all 1st cycle and practically all 2nd, and several 3rd cycle programmes will be offered according to the Bologna model.

The University implemented the Diploma Supplement for the first time in 2002, in a pilot program directed at the degree in Information Systems. This document has been received by all graduation students since 2003 and by all Master graduates since 2006. http://www.saum.uminho.pt/Uploads/SuplementoEn.pdf. The same applies to the Transcript of Records and Learning Agreement. http://www.gri.uminho.pt/Default.aspx?tabid=4&pageid=86&lang=eng

The implementation of this document in the University was not a difficult process since the matrix organization favours the centralization of the student's data. The monitoring of the quality of the Diploma Supplement is assured by a task force involving the main contributing services: Academic Services, International Relations, Information Services and Communication and Image.

The University is one of the three European universities to have received both the ECTS and the Diploma Supplement Labels. For this reason, the University is involved in the European project ELITE´LLL, an extension of the Tuning project.

The teaching staff is aware of the impact of the Bologna process and is in general very motivated to implement the reforms needed for a successful convergence. About 50% of the members of staff have attended workshops and short courses on the new methodologies of learning.

All the efforts made by the Academy in response to the challenges brought on by the Bologna process have given very positive results. The Rectorate, Schools, Departments and the Student Union promoted many debates to discuss the issues raised by the Bologna convergence.

Several difficulties, however, arose in the adaptation of the curricula to the Bologna model. The pertaining legislation was issued very late and the lack of regulations was definitely prejudicial to the progress of the restructuring process. In general, it should be said that the short time available to implement the changes and the lack of government encouragement to promote interaction inside the different disciplines were the main drawbacks.

Final Remarks

This report is the result of intensive work undertaken by the members of the Steering Committee, and of the complementary involvement of different sectors of the University: academic teaching staff, non-teaching staff, services/ offices, students and coordinating and government bodies.

The effort made suggests that the reflections of such a group have reinforced the sense of unity of the institution, and it is thought to be a useful instrument both for following up the implementation of measures suggested by the analysis of the report and the assessment of the Institution. This group may also constitute a permanent council to monitor the organisation and to act as a dissemination agent promoting internal reflection at all levels.

In addition, important changes have occurred while this Report was prepared, and can be foreseen in Portuguese Higher Education, which will have a large impact on the organisation of the University. These changes have to do with the drastic reduction in the public budget available for universities and with recommendations included in the reports from the Organisation for Economic Cooperation and Development (OECD), and the Association for Quality Assurance in Higher Education (ENQA), published in November and December 2006, respectively.

Global SWOT Analysis

Strengths	Weaknesses
• Geographic situation in the most densely populated region of the country. • Strong cultural, social and economic impact in the region. • Good image and reputation. • Clear vision and an institutional strategy for its development. • Experience in the definition and adoption of institutional policies (for teaching, research, internationalisation, knowledge chain and technology transfer, etc.). • Good awareness for quality assurance matters and progressive embedding of a quality culture. • Flexibility in the organisation and management of projects as a result of the matrix structure. • Ability to create and develop inter- and multidisciplinary teaching projects (1st, 2nd and 3rd cycles). • In the forefront of the Bologna process. • Good learning environment and students´ recognition of the quality of teaching/learning and of the good and close relationship with teachers. • High employment rates in many degree areas. • Excellent or Very Good rating of many R&D Units. • Strong engagement in outreach activities (technology transfer, training, personal development, consultancy, services, etc.). • Good network of international contacts, agreements and partnerships. • Sports activity constitutes a differentiating element and creates conditions for real extra-curricular education. • Highly qualified academic staff and a good balance between youth and experience. • Good working environment and collaboration among teaching and non-teaching staff. • Good quality of facilities and equipment. • Good access to scientific and cultural documentation, including excellent library resources. • High quality communication and information support/good ICT systems. • External recognition of the quality of the Services/Offices.	• Strong dependence on public financing. • Insufficient links with alumni. • Low flexibility of program adequacy to market needs (e.g., curricula, calendar, timetables). • Limited involvement of undergraduate students in R&D activities. • Reduced number of subjects taught in English. • Imbalanced experience in distance learning among Departments. • Insufficient organisational communication. • Difficulty in establishing effective communication and collaboration between some Services and Schools. • Financial difficulties in filling up enough middle-management leadership positions. • Some bottlenecks in the facilities (inadequate spaces for improved efficiency in some Services; poor library facilities in the Azurém *Campus*).
Opportunities	**Threats**
• National awareness to the need to improve secondary school completion rates. • Emergent publics for educational projects (over 23 years old; lifelong learning; Portuguese speaking countries). • Recruitment of foreign students. • Bologna changes as leverage to improved integration between education and R&D activities, better articulation between program cycles, and more flexibility in curricula. • Full implementation of e-learning. • Possible fusion between some regional HE Institutions. • Reinforcement of cross border co-operation with Galicia. • Reinforcement of international partnerships to face globalisation. • The challenges of a growing competition amongst HE Institutions. • New sources of funding (e.g., 7th EU FP, increase of national funding for R&D). • New performance assessment mechanisms as leverage to a more efficient human resources management.	• Region with decreasing GDP per capita and low level of educational and cultural development. • Insufficient economic growth and incapacity of absorption of graduates in some areas. • Demographic downswing. • High secondary school dropout rate. • Low level of attraction of science and technology subject areas. • Competition among HE Institutions with similar degrees. • Rigid legal framework and limited autonomy. • Decrease of public funding and consequent severe budget constraints. • Financing of 2nd cycles not guaranteed. • Risk of School/Institute ageing due to limitations on hiring new staff. • Low level of student and teacher mobility. • Postgraduation offer limited by governmental constraints. • Increasing cost of tuition fees. • Insufficient supply of high quality training for non-teaching staff.